PERSON-ENVIRONMENT FIT IN ARMY TALENT MANAGEMENT: AN INTEGRATIVE APPROACH

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ABSTRACT

Spencer J. Clouatre: Person-Environment Fit in Army Talent Management: An Integrative Approach
(Under the direction of Jeffrey R. Edwards)

Research indicates that congruence between the needs of an individual and the rewards provided by their job can influence job satisfaction. This dissertation used person-environment fit theory to examine the relationship between the needs of Army officers and the rewards that they experienced in their most recent Army position. A pilot study developed a set of customized content dimensions which were used to develop and test a tailored measurement instrument for the military sample. The survey was revised after initial testing and then administered to current and former Army officers. Fit between the needs and rewards of ten customized content dimensions were assessed, and the relationship of needs and rewards were analyzed with the primary outcome of interest – job satisfaction. For all content dimensions, job satisfaction increased as rewards increased toward needs. For eight of the content dimensions, job satisfaction decreased as rewards exceeded needs, while two content dimensions reported a continued increase in job satisfaction with excess rewards. For eight of the content dimensions, job satisfaction was higher for respondents that reported high rewards and high needs, rather than low rewards and low needs. Subsequent analysis tested the relationship of job satisfaction with organizational identification, in-role performance and organizational citizenship behaviors to include helping and voice. The relationship between job satisfaction and secondary outcomes were significant, and the relationship between organizational identification and the secondary outcomes were also significant.

To all of the great Americans who volunteer to defend our nation.
Army Strong!

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ADSO	active duty service obligation
CCC	Captain's Career Course
D-A fit	demands-abilities fit
MIQ	Minnesota Importance Questionnaire
N-R fit	needs-rewards fit
OCB	organizational citizenship behavior
OCQ	Organizational Commitment Questionnaire
OCS	Officer Candidate School
OEMA	Office of Economic and Manpower Analysis
OID	organizational identification
O*NET	Occupational Information Network
P-E fit	person-environment fit
P-J fit	person-job fit
PME	professional military education
R<N	misfit in deficiency
R>N	misfit in excess
R=N	fit in equality
ROTC	Reserve Officer Training Corps
SIT	Social Identity Theory
STAY	Strategy to Enhance Retention
TWA	Theory of Work Adjustment
TwJ	Time with Jeff
USASOC	United States Army Special Operations Command

USMA	United States Military Academy
WAPS	Work Aspects Preferences Scale
WVI	Work Values Inventory

CHAPTER 1: ARMY TALENT MANAGEMENT AND PERSON-ENVIRONMENT FIT

Importance of Research Domain

The impetus of this research is grounded in a specific application. *The Army Human Dimension Strategy* (2015) concluded that current talent management systems are not adequate to produce the Army professionals required for the increasingly complex operating environment. The strategic document identifies the need for increased study in the development of talent management strategies that leverage academia and industry collaboration. This dissertation is an attempt to address a small portion of this requirement using the collective research efforts from previous scholars in the application of person-environment fit (P-E fit).

The *Army Human Dimension Strategy* (2015) "seeks to produce a Total Army of cohesive teams of Trusted Professionals who thrive and win in a complex world" (The Army Human Dimension Strategy, 2015, p. 6). The strategy's objectives rely on a critical virtue that is earned over time within the Army profession – trust. The importance of trust cannot be understated in the military culture or in the execution of land warfare.

In an all-volunteer force, officers reserve the right to stay in the service or depart the Army. The overall effectiveness of the Army and the efficiency of our personnel management can benefit from better information that describes the needs, desires, and aspirations of our officers. This proposal does not mean the Army must pander to frivolous requests, nor does it mean that the Army personnel system will lose control of assignments. Instead, it is based on mutual trust that balances the needs and desires of the officer with the requirements and rewards of possible Army career paths. The defense of this nation has always been the responsibility of

the men and women in the Armed Forces. Including their needs and desires in the assignments process does not change that responsibility. If anything, it improves the sense of selfless service and builds more trust between the volunteers and the institution that they serve.

Recently, the US Army Combined Arms Center published the *Talent Management Concept of Operations for Force 2025 and Beyond* (2015). Implementation of the concept of operations is underway and it recognizes the importance of collecting information on the needs and desires of the individual. The guiding principles within the implementation document recognize the importance of a talent management system that balances the needs of the individual and the needs of the organization. The guiding principles specify the use of person-job fit (a proximal application of P-E fit) and a process that empowers the employees. Empowering the officers does not threaten the effectiveness of the Army if we trust our officers. However, facilitating the mutual exchange does require accurate collection of information that reflects the needs and abilities of the officer, and the rewards and demands of future career paths.

Information is the critical mechanism in any voluntary transaction. With the correct information, employers and employees can reach mutually beneficial agreements that increase the overall performance of their organizations and the individual satisfaction of their employees. A comprehensive collection strategy could reveal a large amount of variation in officer needs and a large amount of variance in the rewards provided from existing career paths in the Army. This research will seek to develop a more complete understanding of the rewards that appropriately line up with officer needs and desires in an Army career.

As a prelude to this new strategy, the Office of Economic and Manpower Analysis (OEMA) has implemented talent management based strategies that assess, develop, employ, and retain the right talent for the right jobs (Wardynski, Lyle, & Colarusso, 2009). The OEMA

strategy was introduced to address branching of newly commissioned officers, but it has also laid out a vision for continued interaction between the officer and existing jobs that should improve succession planning throughout the progression from junior to senior officer positions (Colarusso & Lyle, 2014). In the initial branching stage, the talent management strategy from OEMA attempts to leverage the inherent variation in job requirements with the range of individual abilities. OEMA has facilitated the development of a common set of talent priorities that are required within each branch and are also inherent in the abilities of each officer. Through an increased understanding of each branch's requirements and the abilities of each officer, OEMA has facilitated better information in the market for officer employment. Each branch and each officer is better utilized when there is congruence between the demands of the job and the abilities of the assigned officer. The performance potential of each officer should increase when they are assigned to positions that match their capabilities. The Army's interests are clearly improved with increased performance that results from matching of demands and abilities. However, there is another point of view within the paradigm of an all-volunteer Army.

The all-volunteer Army allows freedom of choice. Army officers are generally contracted within an active duty service obligation (ADSO) that spans a window of mandatory service. When the ADSO is complete, the officer is free to choose continued military service or depart the Army. Therefore, the aspirations of the officer must become part of the overall equation. In a parallel sense with the demands of the job and the abilities of the officer, the Army talent management strategy should consider the needs of the officer and the rewards of their current and future jobs. If the needs of the officer are not congruent with the rewards of the job, then there will be a decrease in important outcomes such as satisfaction, organizational identification, and organizational citizenship behaviors. A decrease in these valued outcomes is

likely to prompt a search for other employment opportunities. Thus, in order to retain the right talent for the right jobs, an effective talent management strategy must also include the needs and desires of each individual officer and the rewards provided by the available positions. Fortunately, the Army maintains a wide range of jobs that provide an equally broad menu of rewards that can fulfill officer needs.

Retaining the right officers for the right jobs requires two mutual decisions. The Army has to make the decision to retain the officer, and the officer has to choose to remain in the service. The Army's decision is largely the result of potential and actual performance. The officer's decision is largely the result of satisfaction, their identification with their unit, and their identity as a soldier. A high performing officer who is satisfied with their current position and future outlook results in a commitment from the Army to retain the officer and a commitment from the officer to remain in the Army.

As initial branching is concerned, the OEMA strategy and the Army personnel system are currently implementing measures to align the demands of the jobs and the abilities of the officer corps. In a complementary fashion, the goal of this research is to identify the needs of the officer corps and the rewards that are offered from existing career paths in the Army. This research attempts to answer the following questions:

1. What job characteristics do Army officers seek?
2. How important are these job characteristics to Army officers?
3. To what extent do Army officers want these job characteristics?
4. To what extent do Army career paths provide the job characteristics desired by Army officers?

5. How best do we identify, assess, and link an officer's needs with existing rewards in the Army?

Intended Contributions

This study will contribute to P-E fit literature by applying a unique method that starts with the custom design of a measurement instrument and finishes with polynomial regression analysis that uses response surface methodologies to examine outcomes. Additionally, this study will provide a practical application of the theoretical propositions used in P-E fit. Finally, this study will provide information on the practical application of decision support data in support of talent management initiatives within the Army.

There are three contributions that will benefit the current P-E fit literature. First, this research will illustrate a rigorous and systematic approach in developing relevant content dimensions that are customized to a specific population. The creation of a tailored measurement instrument is a unique strategy that is not common in existing P-E fit research. The next contribution to P-E fit is the development of hypotheses that focus on three levels of fit or misfit (fit, misfit – deficiency, misfit – excess). The analysis of the customized data set will illustrate the effects of fit between needs and rewards on outcomes of interest. Lastly, the research will add to the P-E fit literature by applying polynomial structural equation modeling to analyze outcomes referenced in the hypotheses development.

This research will operationalize propositions derived from P-E fit theory. The comprehensive nature of the design will provide a unique example that differs from the ad hoc approach that is generally encountered in studies of P-E fit. This research will provide a compelling application of P-E fit theory to a practical strategy designed to increase the credibility of personnel decision support data in the Army. Finally, this research will provide a possible

pathway to develop and test content dimensions that are applicable in the Army. The resulting measurement instrument and subsequent analysis techniques can enable future longitudinal studies. The current talent management initiatives require a comprehensive and systematic process that is able to draw connections across spans of time in order to facilitate quality retention and succession planning.

Overview of Research Design

The following study was constructed from the perspective of the individual officer. At the outset, the first priority was important to develop a set of job characteristics or content dimensions that are attractive to Army officers. The content dimensions serve as the basis for the measurement of officer needs and potential rewards offered by their positions in the Army. The determination of fit is described by the congruence or match of potential rewards and officer needs. With the content dimensions established, the next step was to adapt items from previous scholarly research to determine appropriate Army specific items that could properly describe the content dimensions. The pool of items and their respective content dimensions were then compiled to develop the initial Officer Needs-Rewards Survey. This measurement instrument was administered in a pilot test, and the results were subjected to a confirmatory factor analysis in order to determine the reliability and validity of the survey. The results of the confirmatory factor analysis were used to revise and refine the survey into a more efficient measurement instrument. The refined survey was then administered to active duty, retired, and veteran officers from multiple components in the Army. The results from the second administration of the survey were subject to another confirmatory factor analysis in order to validate the measurement model and also examine measures of the outcomes of interest. The measurement model was used to examine linkages between the needs of the officers and the rewards of their

current or past positions in the Army to establish a measure of fit and its relationship with job satisfaction, organizational identification, in-role activities, and organizational citizenship behaviors to include helping and voice.

The five goals of this research are: 1) develop a means for collection of better information on the needs of the officer corps and the rewards of the existing jobs in the Army, 2) complement the current initiatives set forth in the Army talent management strategy, 3) create a reliable and valid measurement instrument that can be adjusted for future data collection, 4) test relationships between fit and outcomes of interest, and 5) contribute to P-E fit research in the domain of needs and rewards. In order to meet these goals, the remainder of this document will develop these ideas in the following format.

The remainder of this dissertation is organized as follows. Chapter 2 will provide an overview of P-E fit and a thorough explanation of the needs-rewards concepts used to match the needs of the individual and the rewards from their environment. In addition, the proposed framework in this study will be presented and the relationships of all variables will be described in detail. A summarized review of the P-E fit literature and its previous applications will follow the review of the fit concepts and the proposed framework. In closing, chapter 2 will identify current shortcomings and address the recommendations that are applied to further analysis. Chapter 3 will provide a detailed discussion of the content dimensions and draw from P-E fit theory to develop the hypotheses that will be tested. Chapter 4 will review Study 1 by providing a detailed description of the process used to development the Officer Needs-Rewards Survey. The description will start with the initial development of content dimensions and lead up to the final version of the measurement instrument, while also providing information on psychometric properties and justification for all revisions. Chapter 5 will review Study 2 by providing a

detailed review of the sample, measures, and analyses which will lead up to a detailed review of the results by hypothesis. In conclusion, chapter 6 will provide a discussion on the implications of the key findings, the limitations, and the possibilities for future research.

CHAPTER 2: LITERATURE REVIEW

Overview of P-E Fit

The theoretical backbone for this research is person-environment fit (P-E fit) theory. P-E fit can trace its roots to the study of vocational choice conducted by Parsons (1909) at the turn of the twentieth century. In setting up the discussion for choosing a vocation, Parsons presented three broad factors for making a wise choice:

> 1) a clear understanding of yourself, your aptitudes, abilities, interests, ambitions, resources, limitations, and their causes; 2) a knowledge of the requirements and conditions of success, advantages, disadvantages, compensation, opportunities, and prospects in different lines of work; and 3) true reasoning on the relations of these two groups of facts (Parsons, 1909, p.5).

In Parsons' opinion, the choice of occupation was comparable to any significant investment. The only difference was that in choosing an occupation, the person was not investing money, they were investing a lifetime of effort – one day at a time (Parsons, 1909). The rise in this idea of matching the attributes of the person with the characteristics of a vocation arose during the escalation of industrial efficiency and the introduction of scientific management proposed by Taylor (1919). Critics of "Taylorism" have always been quick to criticize that the structure ignored human factors, but Taylor believed that the true interests of employers and employees were one in the same (Munsterberg, 1913; Taylor, 1919). The components of the interaction between the individual and the job have not changed, but the understanding of the interaction has improved significantly.

The subsequent contributions that informed the formation of P-E fit were provided by Lewin's field theory (1935, 1951) and Murray's need-press model (1938, 1951). The field

theory work appropriately linked the relationship between the person, the environment, and the outcomes or behaviors. The importance of this identity between the person and the environment was highlighted in Lewin's equation, B=F(P, E). The general form of this relationship illustrates that behavior (B) is a function of the person's individual characteristics (P) and the existing situation, or environment (E). It is important to recognize that the interaction of both components, the specific person (P_a) and the existing environment (E_1), jointly affect the resulting behavior (B). The person informs the environment and the environment informs the person. Lewin (1935) specifically highlights that for one individual characteristic (P_a) to be distinguished from another individual characteristic (P_b), they must be associated with various outcomes or behaviors (B) resulting from the same situation or environments (E_1, E_2, E_n). The importance of this relationship is found in the mutually responsive interaction that exists between the person and the environment. However, Lewin's idea did not specifically identify the nature of the effect or congruence between the person and the environment (Edwards, 2008).

The introduction of Murray's needs-press model (1938, 1951) was the first instance that recognized the needs of the individual as a priority. The typology's major contribution were defining and categorizing different needs that are aligned with stimuli, or press, that can fulfill or prohibit fulfillment of the specific needs (Edwards, 2008). Construction of this typology facilitated commensurate measurements of a specific press with its associated need. Murray was the first to incorporate differences between the actual environment (alpha press) and the perceived environment (beta press). However, his work primarily described needs and need fulfillment without addressing how the relationship influenced outcomes. The initial concepts from Lewin and Murray contributed significantly to the initial framing of ideas in this field of research.

The modern day conceptualization and definition of P-E fit offers a broad canvas which allows for many conceptualizations and theoretical linkages. Edwards & Shipp (2007, p. 4) provide an overarching view that defines P-E fit as "the congruence, match, similarity, or correspondence between the person and the environment." In order to operationalize P-E fit theory, it is useful to distinguish between the type of fit, the level of fit in the environment, the content of fit dimensions (person and environment), and the measurement approach.

Type of Fit. There are two categorizations of P-E fit: supplementary fit and complementary fit. Within the conceptualization and definition of P-E fit, there is a key distinction that differentiates supplementary fit and complementary fit (Kristof, 1996; Muchinsky & Monahan, 1987). Supplementary fit occurs when the person and the environment possess analogous characteristics that facilitate interpersonal similarity (Muchinsky & Monahan, 1987; Kristof, 1996; Cable & DeRue, 2002). Complementary fit occurs when the person and the environment interact in a mutually beneficial exchange to provide what the other requires (Muchinsky & Monahan, 1987; Edwards, 1991; Wanous, 1992; Kristof, 1996). The nature of the exchange in complementary fit results in two perspectives – one representing the environment and the other representing the person. From the perspective of the environment, there are demands which result from job requirements that must be fulfilled by the abilities of a person. This type of complementary fit is appropriately referred to as demands-abilities fit (D-A fit) (French, Caplan, & Harrison, 1982; Kristof, 1996; McGrath, 1976). From the perspective of the person, there are needs which result from personal desires and expectations that must be supplied by the environment. This type of complementary fit is appropriately referred to as needs-supplies fit (N-S fit) (French et al., 1982, Kristof, 1996). For ease of translation, the current study will replace the term supplies with rewards, which differentiates this concept from

its use in other literatures, such as economics (i.e., demand vs. supply). In essence, the person provides abilities which the environment demands (D-A fit), and the environment provides rewards that the person needs (N-R fit). As such, people have abilities and needs, whereas environments have demands and rewards. In summary, there are three conceptually distinct types of fit: supplementary fit, demands-abilities fit (D-A fit), and needs-rewards fit (N-R fit), and the present dissertation will focus on N-R fit

The set of research questions that provided the motivation for this study are attempting to address outcomes that result from the exchange between the needs of Army officers and the rewards that are provided by existing career paths in the Army. In order to formulate a better understanding of the outcomes of interest in this domain, this study is emphasizing the perspective of the person (or officer). Therefore, in this case, the most appropriate conceptualization of P-E fit theory is found in the complementary exchange of needs and rewards explained in the application of N-R fit. There are many good reasons to conduct a more comprehensive review in the future, however the focus of the current study is to build the required information and then examine the outcomes of interest as measured by N-R fit.

Level of Fit in Environment. The next issue of concern in the operationalization of P-E fit is the level of the environment. P-E fit, by definition, treats the person at the individual level; however, it also facilitates multiple conceptualizations of the environment (Kristof, 1996; Edwards & Shipp, 2007). Differences in the categorization of the environment often confound the distinction between supplementary and complementary fit (Edwards & Shipp, 2007). This confusion is avoided if the treatment of the environment is commensurate with the treatment of the person at the individual level.

The level of fit should match the type of fit (supplementary fit, D-A fit, or N-R fit). The use of a complementary fit approach (D-A fit or N-R fit) emphasizes how the interaction between the person and environment can result in a mutually beneficial exchange. Therefore, the exchange must be conceptualized on a similar level of fit. The use of N-R fit in the current study is focused on the needs of Army officers and the rewards that are provided by existing career paths (jobs in the Army). Therefore, in the treatment of N-R fit, the characterization of the environment is at the job level so that the rewards from the job refer to rewards derived from similar people who hold an equivalent position.

Content of Fit Dimensions. The research design within any study of P-E fit is built upon the content of the dimensions on which the person and the environment are compared. Edwards & Shipp (2007) describe a continuum of levels representing person and environment dimensions (global, domain, and facet levels) that range from a more general level down to increased specificity. The interpretation of the global, domain, and facet levels depend on the type of fit used in the research. As applied to N-R fit, the global level implies a level of overall fit between needs and rewards that examine general perceptions of need fulfillment (Cable & DeRue, 2002). At the domain level of N-R fit, needs and reward apply at slightly lower levels in explaining constructs like job complexity, job enrichment, and social interactions (Edwards & Harrison, 1993; Cherrington & England, 1980; Porter & Lawler, 1968). At the facet level in N-R fit, needs and rewards relate to specific aspects of the job like autonomy and variety (Conway, Vickers, & French, 1992; Wanous & Lawler, 1972). Within the person and environment dimensions, it is critical that there is commensurate measurement to facilitate like comparisons (Wanous & Lofquist, 1984; Edwards, 1991; Murray, 1938). The two features of commensurate dimensions are nominal equivalence and scale equivalence (Edwards & Shipp, 2007; French, Rodgers, &

Cobb, 1974). Nominal equivalence is gained by ensuring that the person and the environment are described in the same terms. In N-R fit, existing rewards from the environment can be adapted and framed as equivalent needs required by the person. In this method, job activity provides the framework used to describe the person and the environment (Edwards, 1996). Scale equivalence is gained by ensuring that the person and the environment are assessed on the same metric. In N-R fit, job activity frameworks that display nominal equivalence for the person and the environment can be assessed on similar response scales and then used to measure perceived and desired amounts (Conway, Vickers, & French, 1992).

The current study, using N-R fit, is conceptualized and operationalized at the facet level. Furthermore, the design and data collection provide for nominal and scale equivalence in the content dimensions that explain the person and the environment. The needs and rewards in this study are focused on content dimensions that were derived from specific job characteristics which similarly apply to the person and the environment. The measurement instrument was constructed in a fashion to maintain nominal and scale equivalence.

Measurement of Fit. P-E fit studies generally adopt a direct or indirect measurement approach (Kristof-Brown & Guay, 2010). Direct measures of perceived fit ask the person to report the level of fit they believe exists. Indirect measures normally collect information from the person and the environment separately and then examine the fit between the two values. When P-E fit is conceptualized as general compatibility, direct measures of perceived fit are often used. When P-E fit is conceptualized at more specific levels on particular content dimensions, indirect measures are appropriate.

The importance of the perceived person and environment has a long history in P-E fit research. The original work of Murray (1938) first addressed the distinction between alpha press

(actual reality) and beta press (perceived reality). This difference was operationalized by French, Rodgers, & Cobb (1974) and Harrison (1978) as subjective fit (the match between the person and the environment as they are perceived and reported by the person) and objective fit (the match between the person and the environment as they exist independent of the person's perception). Subjective fit is generally conceived as the more proximal predictor because the person reports their own personal characteristics as well as the characteristics they perceive in the environment separately (Kristof-Brown & Guay, 2010). In objective fit, there are evaluations of the person and the environment that are independent of the person's own perceptions. Within the application of P-E fit theory, it is generally accepted that the objective person and environment affect the subjective person and environment through perceptual biases which are inherent in human information processing, cognitive construction limitations, and situational interpretations that impede purely objective results (Edwards, Caplan, & Harrison, 1998; Harrison, 1978).

The research design and data collection in this study, using N-R fit, used the indirect approach, relying on subjective measures of needs and rewards as viewed by the officers themselves. The use of a self-report survey administration required each respondent to independently assess their perceived needs and the perceived rewards from their job. The subjective measurement approach provides the most proximal predictors of needs and rewards in a separate reporting format. Furthermore, the benefit of the information gained through self-reported perceptions of the environment will more likely contribute to the individual's decision making.

In summary, studies of P-E fit should determine the type of fit, the level of fit in the environment, the content of fit dimensions (person and environment), and the measurement approach prior to execution. The current study uses the complementary effects of subjective N-

R fit by setting up a comparison of the person and their job in the work environment using a facet level of predicted job characteristics that displays nominal and scale equivalence.

Supporting Concepts of N-R Fit

Many studies using P-E fit apply simplifying assumptions that fail to capture the complexities of the interrelationships between the person, the environment, and the expected outcomes (Edwards & Rothbard, 1999). Edwards (1991) provided a comprehensive review of the methodological problems that limited previous studies of P-E fit that result from collapsing the joint effects of the person and environment on outcomes into a two-dimensional relationship. This approach obscures the fact that the person, the environment, and the associated outcome are three conceptually distinct constructs, and therefore their relationship is inherently three-dimensional. Preserving and analyzing the integrity of each construct is properly accomplished in the use of response surface methodology (Edwards, 1991).

If designed properly, research in N-R fit can apply the response surface methodology to answer three critical questions that provide maximum information about the needs of the person, the rewards of the environment, and the outcome of interest (Edwards & Rothbard, 1999). The following description uses job satisfaction as the outcome of interest. First, does job satisfaction improve, worsen, or remain constant as the rewards of the environment increase towards the needs of the person? Second, does job satisfaction improve, worsen, or remain constant as the rewards of the environment exceed the needs of the person? Third, what is the difference in job satisfaction when there is N-R fit at low rewards and low needs versus N-R fit at high rewards and high needs? The first and second question address N-R misfit, and the third question addresses N-R fit. The first question allows the researcher to analyze the case of misfit where the rewards of the environment are less than the needs of the person (misfit, deficiency: $R < N$).

The second question allows the researcher to analyze the case of misfit where the rewards of the environment are greater than the needs of the person (misfit, excess: R>N). The third question allows the researcher to analyze the case of fit where the rewards of the environment equal the needs of the person (fit, equality: R=N) while both needs and rewards jointly vary in their absolute levels. In each scenario, the relationship between the rewards of the environment, the needs of the person and their interaction as applied to job satisfaction are readily available.

Within the P-E fit literature, there is general agreement in the case of N-R misfit deficiency (R<N). Given the general assumption that P-E fit leads to positive outcomes (Chatman, 1989; Dawis & Lofquist, 1984; Wanous, 1992; Edwards, 1991; Kristof, 1996), it only makes sense that resolving a deficiency (R<N) would result in a more positive outcomes. In the example provided here, it is expected that job satisfaction would improve as the rewards of the environment increase towards the needs of the person. In all dimensions, the resolution of deficiencies should result in higher outcomes (Harrison, 1978).

The explanation is more complex in the case of N-R misfit excess, where the rewards of the environment are greater than the needs of the person (R>N). There is no easy answer available. However, Edwards (1996) provided an approach based on time and the given dimension's relation to other dimensions which can assist in resolving ambiguity. In order to create alternative predictions, Edwards (1996) suggests four categorizations: depletion, interference and conservation, carryover.

Depletion and interference indicate that excess rewards in a dimension will worsen the outcome, while conservation and carryover indicate that excess rewards in a dimension will improve the outcome (Edwards & Rothbard, 1999). Depletion occurs when excess rewards reduce the likelihood that needs on the same dimension will be achieved in the future. For

example, excess recognition from a senior officer at a given time may result in fewer accolades in the future if the senior officer does not want to be accused of favoritism. Interference occurs when excess rewards inhibit N-R fit on other dimensions. For example, excess challenge may make it difficult to achieve unit goals and then lead to fewer opportunities for leadership positions. Depletion and interference result in a symmetric relationship between N-R misfit and the expected outcome (i.e., job satisfaction), such that the outcome decreases as rewards exceed or fall short of needs (Locke, 1969; Rice, McFarlin, Hunt, & Near, 1985).

Conservation occurs when excess rewards are retained to fulfill needs on the same dimension in the future. For example, compensation in the form of higher income can be saved to meet future needs. Carryover occurs when excess rewards in one need are used to fulfill other needs. For example, excess autonomy may allow a person to design policies that lead to organizational change which facilitate need fulfillment in other dimensions. Conservation and carryover result in monotonic relationships between N-R fit and the expected outcome (i.e., job satisfaction), such that the outcome improves as rewards increase toward needs and continues to increase as rewards exceed needs (Rice, Phillips, & McFarlin, 1990; Sweeney, McFarlin, & Inderrieden, 1990).

It is also important to recognize the case when excess rewards do not impact future N-R fit on the same dimension or when N-R in a given dimension does not impact other dimensions. In this scenario, the outcome (i.e., job satisfaction) will remain constant as rewards exceed needs and the expected outcome will approximate the level of the outcome associated with the case of equality where rewards equal needs exactly (N=R). The result between N-R fit and the expected outcome is an asymptotic relationship where increasing rewards approaches needs and remains constant as rewards exceed needs (French et al., 1982; Harrison, 1978; Rice et al., 1985).

In summary, the conceptualization of N-R fit and the expected outcome analyzes the relationship of three variables and therefore should be examined using three-dimensional response surface methodology. The research design used in the current study provides for analysis of N-R misfit in deficiency (R<N), N-R misfit in excess (R>N), and N-R fit in equality (R=N). The case of N-R misfit in deficiency should always result in improved outcomes as rewards increase towards needs. The case of N-R misfit in excess should be analyzed using the effects of conservation, carryover, depletion, and interference per dimension. The case of N-R fit in equality should be compared in terms of the outcome.

Proposed Framework

The proposed framework is arranged to flow from attitudinal to behavioral outcomes (See Figure 1). The general acceptance that a person's attitude towards an object facilitates a predisposition to act favorably or unfavorably has garnered a great deal of controversy and some inconsistency in the research over the years (Allport, 1935; DeFleur & Westie, 1958; Wicker, 1969; Fishbein, 1973). Within the constraints and guidance composed from this literature, it is generally accepted that the strength of the relationship between attitudes and behaviors is most apparent when "target elements" correspond (Bagozzi & Burnkrant, 1979). Therefore, it is appropriate to match theoretical concepts and measurement techniques at an equivalent level of analysis. The scaling of job satisfaction, organizational identification, and organizational citizenship behaviors (extra-role and in-role) has been intentionally measured at the same level for all respondents. All variables in the framework have been adapted to facilitate individual level responses that are equivalently paired with individual level attitudes and behaviors.

The primary outcome of interest in this study is job satisfaction. The secondary outcomes are organizational identification and performance (in-role and extra-role). N-R fit is

established by comparing the needs of the person and the perceived rewards from the environment as based on content dimensions. In addition to information on N-R fit, the framework also incorporates a measure of importance for each content dimension. The framework proposes that the importance of the given content dimension will moderate the relationship between N-R fit and job satisfaction. The framework also assesses the relationship between job satisfaction and in-role performance, helping, and voice. Finally, the framework proposes that organizational identification will affect in-role performance, helping, and voice.

The relationships presented in this framework are all based on the subjective person and their subjective perception of the environment as applied to 10 content dimensions which similarly explain the needs of the person and the rewards of the environment. The expected relationship in the case of deficiency (R<N) is that job satisfaction will always increase as the rewards of the environment increase towards the needs of the person. The expected relationship in the case of excess (R>N) is that job satisfaction will improve, worsen, or remain constant given the effects of depletion and interference (decreasing job satisfaction with R>N), and conservation and carryover (increasing job satisfaction with R>N). The expected relationship in the case of equality (R=N) is that job satisfaction should be higher with high rewards and high needs, rather than low rewards and low needs. The moderating effects of the importance in each dimension is expected to increase the intensity of the relationship between needs and rewards, and job satisfaction. Job satisfaction is expected to increase organizational citizenship behaviors (helping and voice). Job satisfaction is also expected to increase organizational identification and in-role performance. Organizational identification is expected to increase organizational citizenship behaviors (helping and voice) and in-role performance.

Defining Needs and Rewards. The foundation of N-R fit is found in the subjective assessment of an individual's needs and rewards. The psychological needs or desires of an individual have been expressed in many ways (Dawis & Lofquist, 1984; Locke, 1969, French, Caplan, & Harrison, 1982, Porter, 1964) and operationalized in a number of different measures (Dawis, England, & Lofquist, 1964; Jergensen, 1978; Super, 1970; Pryor, 1981; Amabile, Hill, Schwartz, 1992; Hennessey, & Tighe, 1994; Edwards & Cable, 2002). Super (1970) developed the Work Values Inventory (WVI) to assess the range of values that affect an individual's motivation to work. The Minnesota Importance Questionnaire (MIQ) was designed in conjunction with the Theory of Work Adjustment (TWA) in order to measure vocationally-relevant need dimensions which referred to reinforcing conditions that apply to job satisfaction (Gay, Weiss, Hendel, Dawis, & Lofquist, 1971). Pryor (1983) presented a conceptual framework in the Work Aspects Preferences Scale (WAPS) that focuses on individual preference where values, or work aspect preferences, are regarded as interests and values applied to specific activities and environments. Edwards & Cable (2002) developed the Work Values Survey (WVS) within the framework provided by Schwartz (1992), but customized the items to identify core work values that differentiated between basic human motivations. In the current study, needs refer to psychological desires, goals, interests, or preferences as applied to the attractiveness of various job characteristics or attributes.

There is an equal amount of variation in the description of rewards that are supplied from membership in an organization or environment (Holland, 1985; Lawler, 1981, Alutto & Belasco, 1972, Cherrington & England, 1980). In this study, rewards refer to general attributes that are specific to a job or position within a person's team or unit. The design of N-R fit measures must provide content dimensions that produce commensurate dimensions which facilitate a common

terminology. The common terminology enables the person to compare their needs and the rewards that are supplied in their environment via the same metric.

There are 10 distinct content dimensions that were used to describe the specific needs and rewards. The content dimensions represent job characteristics that exist in current Army career paths, and they also represent job characteristics that are attractive to the population of Army officers. A great deal of effort was invested to establish nominal equivalence in the items that were used to identify each content dimension. The language describing each construct and the items used to collect the data express both the needs of the officer and the rewards of a job at the team or unit level. The customized set of content dimensions used in the relationship between needs and rewards are: Leadership Opportunity, Autonomy, Meaningful Purpose, Recognition of Potential, Compensation/Benefits, Variety, Teammates, Challenge, Way of Life, and Inspirational Leadership. In order to gain a more comprehensive understanding of the bases of motivation present in this population, the content dimensions represent extrinsic and intrinsic motivational factors. Concepts of extrinsic motivation focus on money, recognition, competition and orientation with others (Amabile, et al., 1994). Intrinsic motivations include challenge, enjoyment, personal enrichment, and self-determination (Amabile, et al., 1994).

Defining Outcomes. The relationships between needs and rewards uses the concept found within complementary fit. Complementary fit occurs when the person and the environment interact in a mutually beneficial exchange to provide what the other requires (Muchinsky & Monahan, 1987; Edwards, 1991; Wanous, 1992; Kristof, 1996). N-R fit is designed to facilitate the perspective of the person, where the goal is to examine the needs of the individual which result from personal desires and expectations. The needs of the person are fulfilled to varying degrees by the rewards that are supplied by the environment. The rewards of

the environment have been adapted from job characteristics that exist in similar positions in the larger organization. Nominal equivalence has been gained by expressing the needs of the person and the rewards of the environment in similar language that is applicable to both entities.

Within complementary fit, N-R fit is designed to emphasize the perspective of the person and D-A fit is designed to emphasize the perspective of the environment. Conceptually, N-R fit is designed to provide better information in the decision making process of the person and D-A fit is designed to provide better information in the decision making process of the environment (meaning the organization). The complementary fit literature does express the intricacies of the relationship between N-R fit and D-A fit; however the focus of this research is concerned with the perspective of the person (officer).

The importance of content dimensions is a critical moderator when applying the relationship of needs and rewards to outcomes of interest like job satisfaction. Edwards (1996, p. 300-301) defines importance as "the degree to which the dimension along which fit is cognitively evaluated is considered central to one's overall job" (Edwards, 1992; Locke, 1976; Rice et al., 1985). The relationship of needs and rewards in each content dimension may illustrate small, large, or no discrepancy. The relationship provides critical information about the perceived congruence between needs and rewards. It is critical to examine if a large or small discrepancy is also of importance to the person. Given the amount of importance and the relationship between needs and rewards, it is possible to obtain larger meaning as applied to expected outcomes. Importance operates as a moderator, such that higher levels of importance result in stronger relationships between discrepancies and outcomes (Edwards, 1992).

Job Satisfaction. Job satisfaction has a long history of study in the organizational behavior literature. Locke (1969) defined job satisfaction as "the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values" (Locke, 1969, p. 316). Job satisfaction is influenced by the perceived relationship between what a person wants from their job and what they receive from their job (Locke, 1969). The primary mechanism used to derive the logic of complementary effects in N-R fit was initiated within the theories of psychological need fulfillment (Locke, 1976; Rice, McFarlin, Hunt & Near, 1985). The underlying theme in both concepts is that people garner more positive attitudes (like job satisfaction) when their needs are fulfilled.

The current conceptualization of N-R fit has been derived from a strong interest in examining the causes of job satisfaction. The current study provides a detailed analysis of the 10 content dimensions and their relationship with job satisfaction as dictated by the subjective needs of the person and their subjective perception of the rewards in the environment. The result of the relationship between needs and rewards determine the effect on job satisfaction. In the case of deficiency (R<N), job satisfaction will increase as rewards increase towards needs. In the case of excess (R>N), job satisfaction will increase, decrease, or remain constant depending on the effects from conservation, carryover (job satisfaction increases) and depletion, interference (job satisfaction decreases). In the case of equality (R=N), job satisfaction will be higher when both needs and rewards are high and job satisfaction will be lower when both needs and rewards are low.

Organizational Identification. Organizational identification (OID) is a longstanding and influential construct in the organizational behavior literature (Brown, 1969). Ashforth & Mael (1992, p. 109) proposed that organizational identification is "the perception of oneness with or

belongingness to an organization, where the individual defines themselves in terms of the organization(s) in which he or she is a member." The authors emphasize that organizational identification, like its predecessor – social identification, is not "an all-or-none phenomenon," rather it is a "matter of degree" (Ashforth & Mael, 1989, p. 21).

The application of organizational identification used in the proposed framework is more congruent with lower levels of identification. The measure used in the collection of data for organizational identification referenced the lowest level of organizational membership (i.e. "unit" level) in the framing of individual items. Therefore, the interpretation of the organizational identification construct in this framework implies "oneness or belongingness" to the person's unit. This level of analysis in the organizational identification construct is comparable to its antecedent (job satisfaction) in the proposed framework. The expectation is that organizational identification at the unit level will have a strong positive relationship with jobs satisfaction, so that increases in job satisfaction will result in increased organizational identification.

Organizational Citizenship Behavior (Helping and Voice). Bateman & Organ (1983) defined organizational citizenship behavior (OCB) as "beneficial behaviors and gestures that can neither be enforced on the basis of formal role obligations nor elicited by contractual guarantee of recompense" (Organ, 1990, p. 46). In a typology suggested by Van Dyne, Cummings, & McLean Parks (1995), organizational citizenship behaviors are categorized as promotive and prohibitive, as well as affiliative and challenging. Promotive behaviors indicate proactive actions that promote or encourage, whereas prohibitive behaviors indicate protective and preventative actions. Affiliative behaviors facilitate cooperation and interpersonal engagements, whereas challenging behaviors emphasize ideas and issues. Helping is defined as cooperative

behavior that is promotive. Helping falls in the affiliative-promotive category of organizational citizenship behavior and it emphasizes interpersonal harmony that is focused on building and preserving relationships (Van Dyne & LePine, 1998). Helping is essential to organizations where roles are interdependent and cooperation is essential to overall performance. Voice is defined as behavior that emphasizes constructive challenge intended to improve rather than criticize. Voice falls in the challenging-promotive category of organizational citizenship behavior. A distinguishing feature of voice is that even in the face of disagreement, the characteristic of this construct is to continue with recommendations and innovate with new ideas that seek improvement to existing policies and standard procedures. Voice is critical to organizations that operate in dynamic environments where continuous improvements are essential to success (Nemeth & Staw, 1989).

The application of the helping and voice constructs in the proposed framework are congruent with the lowest level of analysis. The measure used in the collection of data for helping and voice referenced the lowest level of organizational membership (i.e., "unit" level) in the framing of individual items. Therefore, the interpretation of the helping and voice constructs in the framework implies helping and voice interactions that refer to the person's unit. The expectation is that both extra-role constructs (helping and voice) at the unit level will have a strong positive relationship with job satisfaction, so that increases in job satisfaction will result in increased helping and increased voice interactions. Furthermore, the proposed framework suggests that organizational identification will increase both extra-role behaviors (helping and voice).

In-Role Performance. Katz (1964) provided three basic types of behavior essential for functioning organizations: 1) people must be induced to enter and remain in the system, 2) people must dependably carry out their role assignments, and 3) people must engage in innovative and spontaneous activity that go beyond their role specifications. From these essential behaviors, the organizational citizenship behavior literature has provided a distinction that attempts to delineate between in-role and extra-role behavior (OCBs) (VanDynne & LePine, 1998). The authors define in-role activities as required or expected behavior which is the basis for ongoing job performance. In-role activities can be considered part of a formal job description that outlines tasks as dictated by higher management. In-role behaviors are conceptually distinct from extra-role behaviors since the latter are defined with a lack of enforcement. Simply put, in-role behaviors are enforced and frequently measured to gauge job performance while extra-role behaviors are all those activities which are not outlined in the processes which define an organization's standard procedures.

The application of the in-role construct in the proposed framework is congruent with the lowest level of analysis. The measure used in the collection of data for in-role performance referenced the lowest level of organizational membership (i.e., "my responsibilities" or "my job") in the framing of individual items. Therefore, the interpretation of the in-role construct implies in-role performance that refers to the person's job responsibilities. The expectation is that the in-role construct at the job level will have a strong positive relationship with job satisfaction, so that increases in job satisfaction will result in increased in-role performance. Furthermore, the proposed framework suggests that organizational identification will increase in-role performance.

Review of N-R Fit and Job Satisfaction

The study of job satisfaction served as one of the primary outcomes of interest in the development of P-E fit and the eventual modern framework. The original focus in the need fulfillment literature (French & Kahn, 1962; Harrison, 1978, 1985; Maslow, 1954; Porter, 1961, 1962; Wanous & Lawler, 1972) conceptualized satisfaction of innate biological needs such as food and shelter, whereas current job satisfaction and N-R fit research has expanded to include psychological needs centered on learning and socialization within organizational behavior (Cable & Edwards, 2004). Schaffer (1953) developed a theory of job satisfaction which outlined a simple proposal. The theory stated that "overall job satisfaction will vary directly with the extent to which those needs of an individual which can be satisfied in a job are actually satisfied; the stronger the need, the more closely will job satisfaction depend on its fulfillment" (Schaffer, 1953, p.3). In a study of 72 employees, Schaffer (1953) found a strong correlation between respondents' two strongest needs and overall satisfaction. Katzell (1964) continued the research and extended the theoretical framework that defined job satisfaction "as the hedonic or affective response of a job incumbent to stimuli furnished by his [sic] job and its attendant circumstances" (Katzell, 1964, p. 359). In the extension provided by Katzell (1964), it was indicated that the personal values of the job incumbent should measure the magnitude and intensity as related to applicable job features. Locke (1969) defined job satisfaction as "the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values" (Locke, 1969, p. 316). Within the discussion of the construct, the author explained that job satisfaction is a function of a perceived relationship that exists between what a person wants from their job and what they receive from their job (Locke, 1969). The use of P-E fit was not explicitly mentioned in any of the three previous research efforts concerning job satisfaction.

However, the fundamental premise and obvious similarities between the development of job satisfaction theories and the complementary effects that evolved in the analysis of N-R fit focus on the same interaction – the extent to which the environment provides rewards that meet the needs of the person. The primary mechanism used to derive the logic of complementary effects in N-R fit was initiated within the theories of psychological need fulfillment (Locke, 1976; Rice, McFarlin, Hunt & Near, 1985). The underlying theme in both concepts is that people garner more positive attitudes (like job satisfaction) when their needs are fulfilled. In seeking congruence within N-R fit, it is the rewards or benefits of the environment that meet the needs or desires of the individual.

Edwards (1991) provided a detailed critique of person-job fit (P-J fit) that revealed the lack of a comprehensive review which could unify the body of knowledge. P-J fit was defined as the fit between the abilities of a person and the demands of a job or the desires of a person and the attributes of a job. The review consolidated many similarities from the job satisfaction and job stress literature, while also highlighting numerous methodological techniques that forced the community to reassess previous findings (Edwards, 1991). The vast majority of empirical P-J fit research to date had been focused on the fit between employee desires and job supplies (N-R fit). With few exceptions, the studies indicated that fit indices representing job supplies minus employee desires were positively related to job satisfaction, and the relationship between desires-supplies fit (N-R fit) and outcomes was more properly identified when desires were measured in terms of preferences (Edwards, 1991). Interestingly, Edwards (1991) confirmed that the relationship between desires-supplies fit (N-R fit) showed less consistency in demonstrating a relationship with job performance (Ivancevich, 1979; Lawler & Porter, 1967; Slocum, 1971).

Edwards (1991) highlighted many shortcomings in the research methodology which had become common practice. The issues can be categorized in four areas: sampling, design, measurement, and analysis. Within the sampling area, previous studies focused on small samples sizes (i.e. less than 200) that were drawn from within restricted ranges that resulted in limited variation in the supplies or rewards provided by the environment. Within the design area, previous studies relied on cross-sectional data that limited the ability to examine cyclically recursive relationships between fit and expected outcomes.

Within the measurement area, previous studies failed to maintain the integrity of commensurate measures through the use of summary indices that collapsed conceptually distinct content dimensions (Edwards, 1991). Furthermore, Edwards (1991) highlighted that little regard was provided for maintaining commensurate measurements regarding the specific job content dimension with similar outcomes that were commensurate with the same dimension. The measurement area had also been plagued with a failure to differentiate between the two cases of complementary fit: N-R fit and D-A fit. Confounding N-R fit and D-A fit results in the loss of important conceptual distinctions and the differential relationships associated with their outcomes (cf. Edwards & Cooper, 1990). The last issue in the measurement area was an attempt to resolve issues with difference scores by using a direct measurement strategy. Strategies of direct measurement are used to facilitate single item responses that allow the person to derive a response on degree of fit without taking individual measures of the person and the environment, respectively (Edwards, 1991). Direct measurement strategies result in ambiguous interpretations because they presuppose the form of the relationship between fit and outcomes, they prevent separate estimation of relationships involving the person and the environment, and they do not

provide a mechanism for identifying whether the person or environment is individually responsible for the relationship between fit and outcomes (Edwards, 1991).

Finally, in the area of analysis, Edwards (1991) emphasized the ambiguous and potentially misleading findings that could result from the tendency to reduce the person and environment measures into a single index (i.e. some transformation of a difference score like absolute or squared differences). The argument is that fit indices do not provide any conceptual advantage over separate person and environment measures considered jointly. In fact, fit indices report relative information while discarding information on the magnitude and direction of the person and the environment that could assist in detecting asymmetries (Edwards, 1991). The nature of fit indices is fundamentally multidimensional because they collapse two distinct constructs (the person and the environment) into a single measure (Hattie, 1985; Hunter & Gerbing, 1982). When fit indices are created, the person and the job cannot be readily inferred and any interpretation is ambiguous. Furthermore, fit indices fail to meet the requirements for construct and discriminant validity (Cronbach & Meehl, 1955; Johns, 1981). Edwards (1991) provided a strong argument that there is no advantage in using fit indices over their constituent components. In fact, it is suggested that fit indices provide less, not more explanatory power.

Edwards (1991) offered numerous recommendations to generate more conclusive evidence on the nature and consequences resulting from N-R fit. First, fit studies should conceptualize the relationship between the person, job, and the outcome in three dimensions to facilitate the integrity of each variable. Second, in the analysis of results, it is suggested to incorporate three dimensional methods, like response surface methodology, that allows for testing in multiple cases of N-R fit (R=N; both high, both low) and N-R misfit (deficiency, R<N;

excess, R>N). Third, fit studies should uncover any moderating effects between the variables and the possible inclusion of the job attributes' importance (Edwards, 1991).

The use of importance as a moderator between the level of fit and an expected outcome reveals the intensity of the fit or misfit. In a theory of stress, coping, and well-being that used complementary N-R fit, Edwards (1992, p. 251) defined importance as the "degree to which the employee views a discrepancy as central to his or her overall well-being." The expectation when using importance as a moderator is that the existing discrepancy between misfit and outcomes (well-being in the definition) will illustrate even stronger relationships (Janus & Mann, 1977; Klein, 1989; Locke, 1969; McGrath, 1976). However, there has been some disagreement in the application of importance as a moderator in predicting job satisfaction. Early studies provided evidence that weighting facet satisfaction with importance did not increase the explained variance in overall satisfaction (Blood, 1971; Ewen, 1967, Mikes & Hulin, 1968). Mobley & Locke (1970) described that facet satisfaction already included the moderating effects of importance since facet satisfaction is a result of the discrepancy between perceptions and values weighted by value importance. Instead, Mobley & Locke (1970) and others (Evans, 1969; Locke, 1969) suggested that importance should be used to weight the discrepancy itself. Edwards (1992) confirmed this methodology by using importance to moderate the effects of the discrepancy (N-R fit or misfit) not the outcomes of the discrepancy.

In a review of the practical applications of incorporating N-R fit, Cable & DeRue (2002) extended the recommendation from Edwards (1991) and suggested that it would be beneficial for organizations to conduct longitudinal analysis of fit across time in order to create accepted standards of fit to manage succession planning. With an established standard of fit, the proposed

fit scales could be used for recruiting and career management decisions for the employee and employer.

Kristof-Brown, Zimmerman, & Johnson (2005) reviewed the relationships between types of fit as applied to pre-entry and post-entry individual level criteria in a meta-analysis. The authors include multiple moderators of fit-outcome relationships to include various conceptualizations, measurement approaches, and study design. Maintaining commensurate dimensions of person and environment measures is a continuous challenge, but a critical foundation when using moderators in P-E fit research (Edwards, Caplan, & Harrison, 1998; French, Rogers, & Cobb, 1974). Part of the inclusion criteria in the meta-analysis addressed previous research that measured the person and environment on commensurate dimensions. However, it was found that many of the conceptualizations failed to maintain variables at commensurate measurement dimensions – a necessary precondition for fit (Edwards et al., 1998, p. 41). In keeping with the original theories of need fulfillment (Locke, 1976; Rice, McFarlin, Hunt, & Near, 1985), it was hypothesized that the primary mechanism influencing work attitudes would be found in complementary fit applied at the appropriate level of analysis (like using N-R fit to measure employee perception). The results indicated that the initial conceptualization of fit had the most influence on fit-outcome relationships. Specifically, job satisfaction was most strongly related to conceptualizations at the P-J fit level, using complementary effects of N-R fit. Kristof-Brown et al. (2005) found that N-R fit had the greatest impact on attitudes and behavior which confirmed the previous work conducted by Cable & Edwards (2004). Echoing previous recommendations, Kristof-Brown et al. (2005) also mentioned the need for longitudinal studies that analyze changes in individual fit levels over time.

In a more recent review of the current state of P-E fit, Kristof-Brown & Guay (2010) conducted a comprehensive and critical appraisal of past, present, and future research. The authors took on the daunting task and attempted to integrate the continuum of P-E fit conceptualizations. The first broad, and generally accepted, condition in P-E fit is that the relationship between a person and an environment work in concert to influence outcomes. The next condition, where there is some disagreement, addresses the definition of parameters used to determine P-E fit interactions. It is commonly accepted that any study of P-E fit should incorporate commensurate dimensions that "determine the proximity of the person and the environment to one another" (Edwards, Caplan, & Harrison, 1998, p. 31). The following condition, where there is a range of conclusions, is the correspondence (exact correspondence, commensurate compatibility, and general compatibility) between levels of the person measurement (P) and the environment measurement (E). The authors express the importance of addressing the condition of fit or misfit (P=E, P>E, P<E) from the consequences that may result from them. Beyond these initial overarching concerns, the authors address the critical array of mechanisms in the actual measurement of P-E fit. The measurement approach depends on whether fit is conceptualized as exact correspondence, commensurate compatibility, or general compatibility. When P-E fit is conceptualized as general compatibility, direct measures of perceived fit are appropriate. When P-E fit is conceptualized as exact correspondence or commensurate compatibility, indirect measures of perceived fit are appropriate. Direct measures of perceived fit ask the person to report the fit that they believe exists. Indirect measures normally collect information from the person and the environment separately and then calculate fit as the relationship between the two values. This difference was operationalized by French, Rodgers, & Cobb (1974) and Harrison (1978) as subjective fit, the match between the person and

the environment as perceived and reported by the person and objective fit, the match between the person and the environment as it exists independently of the person's perception. Subjective fit is generally conceived as the more proximal predictor because the person reports their own personal characteristics as well as the characteristics they perceive in the environment separately.

The Encyclopedia of Industrial and Organizational Psychology defines job satisfaction as "a pleasurable or positive emotional state that results from one's appraisal of one's job or job aspects" (Parker, 2007, p. 406). The affective response and the cognitive appraisal of what a job provides to an individual are both addressed in this definition. Schleicher, Hansen, & Fox (2009) treat job satisfaction as a stable attitude that assumes employees are capable to correctly apply both affective and cognitive components. Meta-analytic results from Kristof-Brown et al. (2005) illustrate that job satisfaction is the attitude most strongly predicted by P-J fit. Of particular interest, the same study using the complementary effects of N-R fit at the P-J fit level had an even stronger relationship with job satisfaction. As previously stated, the measurement approach used to assess fit is also of critical interest. Kristof-Brown et al. (2005) reported that subjective measures of fit produced the largest effect sizes. In the measurement of job satisfaction, the most appropriate conceptualization from the employee perspective is a subjective measurement strategy that draws comparisons between the needs of the individual and the rewards of the job (complementary N-R fit) at the P-J level.

In summary, there are numerous lessons learned from previous research efforts. First of all, the selection of content dimensions is critically important to the foundation of any N-R fit research. Also, as applied to content dimensions, there are compelling theoretical arguments that the importance of the dimension should be applied as a moderator between N-R fit and the expected outcome. In the analysis of the results from N-R fit research, it is critical to address the

many different cases of fit and misfit. In the case of N-R fit, the construction of hypotheses should expound on the instances of fit when rewards are high and needs are high (high, high) versus the case when rewards are low and needs are low (low, low). In the case of N-R misfit, the construction of hypotheses should seek to interpret the differences that exist in N-R fit deficiency and N-R fit excess. The development of hypotheses in N-R fit must incorporate theoretical construction that tests specific relationships which advance the overall body of knowledge. Finally, the methodological advancements (Edwards, 1991) that have challenged historical research should be judged by their merit and adopted in order to increase the credibility and efficiency of research efforts.

The most appropriate analysis of N-R fit and job satisfaction is found when all three variables – the person, the environment, and the outcome – maintain their integrity in analysis using response surface methodology. N-R fit research should attempt to customize content dimensions that are appropriate to the specific population. The importance of each dimension should be incorporated as a moderator to assist in explaining the relationship between the discrepancy (N-R fit or misfit) and the outcome (job satisfaction). Another critical design construct is the use of conservation, carryover and depletion, interference to illustrate possible effects on job satisfaction. Similarly, the examination of N-R fit that illustrates congruence between rewards and needs should include theoretical arguments that explain the effects on outcomes when rewards and needs are both high or when rewards and needs are both low. There is a common theme within the review that suggests the need for more longitudinal studies that would facilitate the analysis of N-R fit over time. Conducting longitudinal research in N-R fit could facilitate standards of fit that could be useful to employees and employers in making decisions on succession planning.

Review of Job Satisfaction and Organizational Identification

Organizational identification (OID) is a longstanding and influential construct in the organizational behavior literature (Brown, 1969; Hall, Schneider, & Nygren, 1970; Lee, 1971; O'Reilly & Chatman, 1986; Patchen, 1970; Rotondi, 1975). In the development of OID, there has been some confusion with related constructs such as organizational commitment and internalization (Ashforth & Mael, 1989). The original definition of organizational commitment used identification as part of the theoretical explanation. Mowday, Steers, & Porter (1979), the authors of the Organizational Commitment Questionnaire (OCQ), defined organizational commitment as "the relative strength of an individual's identification with and involvement in a particular organization" (Mowday, et al., 1979, p. 226). In their view, organizational commitment consisted of three critical factors: 1) belief in and acceptance of the organization's goals and values, 2) willingness to exert effort on behalf of the organization, and 3) a desire to maintain membership (Mowday et al., 1979). Ashforth & Mael (1989) argued that the definition and critical factors of organizational commitment included internalization, behavioral intentions, and affect but not identification. Furthermore, the authors explained that organizational commitment and internalization were not organization-specific.

Ashforth & Mael (1989) and other proponents of organizational identification (Farkas & Tetrick, 1989; Hackett, Bycio, & Hausdorf, 1994; van Knippenberg & van Schie, 2000; DeMoura, Abrams, Retter, Gunnarsdottir, & Ando, 2009) turned to social identity theory (SIT) to restore coherence across the conceptualizations. Tajfel & Turner (1985) developed SIT and explained that people classify themselves and others into many different social categories to enable individuals to order the social environment and identify themselves and others. This idea was derived from previous concepts provided by Tolman (1943) that referenced group

identification. The research in social and group identification (Toman, 1943; Foote, 1951; Hogg & Turner, 1987; Kelman, 1961; O'Reilly & Chatman, 1986) suggest that identification should be viewed as a perceptually cognitive construct where the individual personally experiences the successes and failures of the group. The specific distinction that is most pertinent among this research is that identification is organization-specific, whereas organizational commitment may allow an individual to pursue their goals in a similar organization that shares similar goals. For example, if another organization was more convenient, the individual could move without sacrificing their own personal goals (Ashforth & Mael, 1989). Levinson (1970) highlights this distinction by claiming that an individual who maintains high organizational identification will suffer some loss when leaving their specific organization. In an attempt to provide conceptual clarity, Ashforth & Mael (1992, p. 109) proposed that organizational identification is "the perception of oneness with or belongingness to an organization, where the individual defines themselves in terms of the organization(s) in which he or she is a member." The authors emphasize that OID, like its predecessor – social identification, is not "an all-or-none phenomenon," rather it is a "matter of degree" (Ashforth & Mael, 1989, p. 21)

Ashforth & Johnson (2001) and other researchers (Brewer, 1995; M. E. Brown, 1969; R. M. Kramer, 1991; Lawler, 1992; Scott, 1997) distilled the conceptualization of organizational identification even further by proposing that lower order identities may be more subjectively important and relevant than higher order identities. A study using government employees and university faculty members conduct by van Knippenberg & van Schie (2000) measured the relevance of a lower order identity and higher order identity to reveal that the lower order identity was both stronger than the higher order and more strongly related to organizational

attitudes. These findings imply that lower order measures, that more explicitly translate day-to-day activities, may provide better information.

Ashforth & Mael (1992) provided an empirical review of their conceptualization of OID by testing the traditional organizational antecedents and proposed individual antecedents to include satisfaction. The conceptualization of satisfaction was derived from Bullock (1952) and applied in a manner that judged the individual's alignment of personal goals with contributions to the organization. The model proposed that resulting organizational behaviors derived from satisfaction would be mediated by organizational identification. The test showed that organizational identification partially mediated the relationship between the individual's satisfaction and the resulting organizational contributions (Ashforth & Mael, 1992).

Prior to the reformulation of organizational identification provided by Ashforth & Mael (1992), many researchers (Porter, Steers, Mowday, & Boulian, 1974; Steers, 1977; Stevens, Beyer, & Trice, 1978; Morris & Sherman, 1981) had provided results that described job satisfaction as a theoretical antecedent of organizational commitment. At that time, the organizational commitment construct was comprised of two primary components: job attachment and job commitment (Williams & Hazer, 1986). Farrell & Rusbult (1981, 1983) referred to job commitment as the extent to which an employee perceived that they connected to a job (possible precursor of OID). Porter et al., (1974) suggested that the daily interaction with the work environment would cause a more rapid formation of satisfaction and would therefore serve as a suspected cause of commitment. Steers (1977) continued this logic by suggesting that individuals would follow the role of exchange processes and satisfy their needs and desires prior to forming attachment and commitment with their organizations. Williams & Hazer (1986) conducted a study of two samples to determine if job satisfaction was a determining factor that is

mediated by organizational commitment in its effect on turnover. The findings showed support for the satisfaction-commitment relation and it also provided clarification through which personal and organizational characteristics influence satisfaction and subsequently lead to increased commitment. Farkas and Tetrick (1989) conducted a longitudinal study of first term Navy personnel in order to retest the findings proposed by Williams & Hazer (1986). The retest found only partial support of the causal nature, but did find strong support that there was a link between satisfaction and job commitment, a precursor to organizational identification.

DeMoura et al. (2009) extended the work between individual satisfaction and organizational outcomes. However, this more recent study replaced organizational commitment with organizational identification. After reviewing the historical link between satisfaction and organizational commitment, the authors construct a parallel comparison of job satisfaction and organizational identification at a lower identity level using conceptual arguments from Tyler and Blader (2000). Tyler and Blader (2000) argue that variables affecting rewards and incentives are likely to affect job participation variables indirectly through status variables like identification, which is consistent with social identity theory (Tajfel & Turner, 1985). DeMoura et al. (2009) compare two competing models where job satisfaction or organizational identification are treated as a mediator for the other's relationship with turnover intentions. Consistent with social identity theory, organizational identification mediated the relationship between job satisfaction and turnover intentions more than job satisfaction mediated the relationship between organizational identification and turnover intentions (DeMoura et al., 2009). The authors do not assume temporal priority in either model, but they do make a theoretical argument about the most proximal mediator. Since organizational identification is described as a "perception of oneness" that connects the self and the organization, then it would make sense that organizational

identification would be a more proximal mediator to a behavioral outcome like turnover intention. This logic is consistent with the conceptualization presented by Williams & Hazer (1986) that prescribed job satisfaction as a potential antecedent of organizational identification. Over time, increased job satisfaction is expected to result in increased organizational identification that can affect behavioral outcomes.

In summary, previous research indicates that there is a strong link between job satisfaction and organizational commitment, as well as job satisfaction and organizational identification. The relationship between job satisfaction and organizational commitment has evolved to keep pace with the conceptualization of organizational identification. The critical difference that established organizational identification as a distinct concept, differentiable from organizational commitment, is the feeling of personal loss if an individual were to vacate membership. Furthermore, the strength of organizational identification is more apparent at lower levels of identity that describe habitual or daily interaction which is descriptive of job satisfaction. The salience of lower level identification at the unit level appropriately aligns with previous theoretical linkages to N-R fit and its relationship with job satisfaction. The organizational identification literature shows a preference to outcomes such as turnover intentions. There is a lack of research in organizational identification's role as a mediator between job satisfaction and extra-role behaviors. Previous research recommends that future examinations of the relationship between organizational identification and organizational citizenship behaviors (extra-role) include in-role performance in order to examine the distinction that individuals draw between the two distinct activities.

Review of Organizational Identification and Performance (In-role & Extra-role)

Katz (1964) addresses the problem of how individuals tie into organizational structures to become functioning units of the larger social system. However, it was Barnard (1938) who first highlighted the theoretical and practical significance of the "willingness of persons to contribute efforts to the cooperative system" (Barnard, 1938, p. 83). Today, many concepts, including organizational commitment (Steers, Mowday, & Porter, 1982), organizational identification (Ashforth & Mael, 1989), and organizational citizenship behavior (Bateman & Organ, 1983; Smith, Organ, & Near, 1983), address various individual behaviors that facilitate organizational success by going above and beyond the strict guidelines that define personal job responsibilities. Katz & Kahn (1966) referred to these cooperative gestures as spontaneous behavior which extend beyond the expected performance that is described in the job position. However, it was Bateman & Organ (1983) that coined the term organizational citizenship behavior (OCB) to denote "beneficial behaviors and gestures that can neither be enforced on the basis of formal role obligations nor elicited by contractual guarantee of recompense" (Organ, 1990, p. 46).

The organizational citizenship behavior literature has provided a distinction that attempts to delineate between in-role behavior (required or expected behavior which is the basis for ongoing job performance) and extra-role behavior (OCBs) (VanDynne & LePine, 1998). A large portion of research in behavioral outcomes has been focused on studies which investigate the motivational basis for organizational citizenship behaviors (Organ, 1990). In order to reduce any "conceptual redundancy" between organizational citizenship behaviors and organizational commitment, Organ (1990) provided a theoretical argument which used the O'Reilly & Chatman (1986) interpretation of organizational commitment. This interpretation portrays organizational

commitment as a psychological state based on the strength of identification with the organization and on the self-internalization of its values.

Bateman & Organ (1983), in their seminal work that provided the definition of organizational citizenship behaviors, identified two bases that describe why extra-role behaviors would be influenced by job satisfaction. First, the authors cite social exchange theory (Adams, 1965; Blau, 1964) which states that people seek to provide a reciprocal response to those who provide benefit to them. Second, the authors cite findings from social psychological experiments (Rosenham, Underwood, & Moore, 1974; Clark & Isen, 1982) that strongly suggest pro-social gestures occur when individuals experience positive affective states. Given that the measures of job satisfaction meet these two conditions, it is expected that more satisfied individuals will engage in more pro-social, extra-role behaviors. The theoretical lineage of this proposition seems to harken back to Barnard (1938) and his initial intuition that the "willingness to cooperate, positive or negative, is the expression of the net satisfactions or dissatisfactions experienced or anticipated" (Barnard, 1938, p. 85). Each explanation (Bateman & Organ, 1983; Barnard, 1938) seems to contain both cognitive and affective components of job satisfaction. However, the majority of research in measures of overall satisfaction with life (Andrews & Wiley, 1976; Campbell, 1976) and measures of job satisfaction (Organ & Near, 1985; Brief & Roberson, 1987; Abelson, Kinder, Peters, & Fiske, 1982; Organ, 1990) provide evidence that the cognitive dimension is more predominant. Given the dominant position that cognitive appraisal holds in the measurement of job satisfaction, it would seem appropriate to assume that the cognitive component, rather than the affective component would also drive organizational citizenship behaviors. This assumption is validated with a large number of empirical studies which have reliably illustrated that job satisfaction measures correlate with measures of

organizational citizenship behaviors (Bateman & Organ, 1983; Motowidlo, 1984; Puffer, 1987; Smith, Organ, & Near, 1983).

Extra-role behavior that focuses on the success of the whole organization, rather than the success of the individual will most likely be performed by members that strongly identify with the organization. A large number of studies (Ellemers, Van Rijswijk, & De Gilder, 1998; Haslam, Powell, & Turner, 2000; Ouwerkerk, Ellemers, & De Gilder, 1999; Tyler, 1999; van Dick, Grojean, Christ, & Wieseke, 2006; van Knippenberg, 2000) conducted in organizational settings have reported a strong positive correlation between organizational identification and organizational citizenship behaviors. Collective interest begins to be interpreted as self-interest as individuals internalize the organizational values and organizational interests as their own (van Knippenberg & Sleebos, 2006; Ashorth & Mael, 1989; Duton, Dukerich, & Harqual, 1994). In fact, several studies have demonstrated stronger relationships between organizational identification and extra-role behaviors, rather than in-role behaviors (van Knippenberg & Ellemers, 2003). In-role tasks are generally more limited by each individual's ability, whereas personal attitudes that lead to extra-role behavior is an unlimited (or at least more flexible) resource that is under the individual's control (van Knippenberg, 2000). However, there is some theoretical disentanglement that continues to evolve. Boros, Curseu, & Miclea (2011) have proposed that with few exceptions (Johnson & Morgeson, 2005; Meyer, Becker, & van Dick, 2006), researchers who differentiate between identification and commitment are focusing solely on the cognitive side to define organization identification, and solely on the affective side to define organizational commitment (e.g., Ashforth & Mael, 1989; Riketta, 2005). In a field setting, the researchers found that cognitive identification had a reduced impact on organizational-related attitudes, but a strong impact on organizational behaviors. Additionally,

the researchers found that affective commitment had a reduced impact on organizational behavior, but a strong impact on organizational attitudes. The Boros et al., (2011) results indicate that cognitive identification has a direct effect on organizational behaviors and an indirect effect on organizational attitudes that is mediated by affective commitment; hence there is a double route to organizational behavior, the direct one and an indirect one via affective commitment and attitudes that strongly relates to organizational behaviors.

Williams & Anderson (1991) conducted empirical research to examine the extent to which extra-role behaviors differentiated from in-role activities, and to examine the components of job satisfaction and the components of organizational commitment as they relate to the performance of organizational citizenship behaviors. Williams & Anderson (1991) distilled job satisfaction down to its affective and cognitive components, and also distilled extra-role behavior from in-role performance. Within the organizational citizenship behaviors, the authors constructed two components – one explaining citizenship behaviors that benefit the organization in general, and one explaining citizenship behaviors that immediately benefit the individual and indirectly contribute to the organization. In addressing the final construct, Williams & Anderson (1991) followed the previous conceptualization of O'Reilly & Chatman (1986) to distill organization commitment into three bases of psychological attachment: 1) compliance, or instrumental involvement for specific extrinsic rewards, 2) identification, or involvement based on desire for affiliation, and 3) internalization, or involvement predicated on congruence between individual and organizational values. The results suggested that in-role activities and the two components of organizational citizenship behaviors (beneficial to the organization directly and immediately beneficial to the individual, indirectly to the organization) were all relatively distinct types of performance. The results also suggested that the cognitive form of job

satisfaction predicted both conceptualizations of organizational citizenship behaviors, whereas the affective components were non-significant.

Foote & Tang (2008) conducted a similar investigation to test the relationship between job satisfaction and organizational citizenship behaviors by using a measure of commitment (team commitment) to moderate the relationship. Previous research by Bishop and Scott (2000) discovered support for a difference in team commitment and organizational commitment where team commitment moderated the relationship between perceived team support and in-role performance (job performance). The Foote & Tang (2008) study extended this research to extra-role behavior in self-directed teams. Following the Baron and Kenny (1986) moderation technique, the authors first proved the relationship between job satisfaction and organizational citizenship behavior, and then found support for a positive relationship between team commitment and organizational citizenship behavior (e.g. Bishop & Scott, 2000; DeLara & Rodriguez, 2007). The results indicated that team members (rather than non-team members) are more likely to develop strong personal relationships within their proximal unit. This concept is supported by field theory which argues that proximity and salience of environmental elements contribute substantial meaning to an individual's reactions to their environment (Mathieu & Hamel, 1989).

Van Dyne & LePine (1998) distilled the conceptualization of organizational citizenship behaviors by assessing construct and predictive validity of two specific types of promotive extra-role behaviors (helping and voice) from in-role behaviors. The study had three goals: 1) to differentiate between in-role and extra-role (helping and voice) behaviors, 2) to distinguish the extent to which self, peer, and supervisor conceptualizations of helping, voice, and in-role behavior are similar, and 3) to assess the extent to which extra-role behavior explains variance in

performance in a longitudinal experiment (VanDyne & LePine, 1998). The results displayed support for the convergent, discriminant, and predictive validity of helping, voice, and in-role behavior across all three rating sources (self, peer, supervisor). The results also showed that correlations among helping, voice, and in-role behavior were highest for supervisor-reports and lowest for self-reports. The recommendation offered by the authors is that self-reports are only appropriate for studies involving self-conceptualizations, self-image, or self-development.

Grant & Mayer (2009) continued the research into the antecedents of extra-role behaviors using motivational perspectives (Borman & Penner, 2001; Hanson & Borman, 2006; Organ, 1990) which link three mechanisms of pro-social behavior that could cause an increase in organizational citizenship behaviors (Rioux & Penner, 2001). The hypotheses which were tested both included a measure of pro-social motives which predicted that higher pro-social motives would result in greater affiliative and challenging citizenship behavior. The results indicated weak positive associations between pro-social motives and both affiliative and challenging forms of citizenship behavior.

Strengths and Recommended Improvements

The previous research indicates that there is a strong relationship between job satisfaction and organizational citizenship behavior (helping, voice), and a strong relationship between organizational identification and organizational citizenship behaviors (helping, voice). Interestingly, the relationships between job satisfaction and in-role performance, as well as the relationship between organizational identification and in-role performance have proven to be lower than the equivalent relationships with extra-role behavior. The expectation is that extra-role behaviors are not limited to personal abilities and skill, whereas in-role behaviors are in some part restricted by the person's ability. The previous research recommends that any

measure of organizational citizenship behaviors (extra-role) should also include an in-role measure. Additionally, most researchers emphasize the recommendation for commensurate levels of analysis in the measurement and examination of extra-role and in-role behaviors. Previous results indicate that proximity and salience contribute substantial meaning to a person's interaction with their environment. By using lower levels of identification (i.e., team commitment), researchers found that identification moderated the relationship between job satisfaction and organizational citizenship behaviors. Furthermore, the relationship between job satisfaction and organizational citizenship behaviors was stronger when identification was high. Research in rating sources (self, peer, supervisor) concluded that correlations between helping, voice, and in-role behaviors were highest when supervisor reports were used and lowest when self-reports were used. The recommendation is to only use self-reporting for studies involving self-conceptualizations, self-image, or self-development. The previous review of job satisfaction suggested that subjective fit reported the strongest relationships when reporting attitudinal outcomes (Verquer et al., 2003). In a similar study that focused on behavioral outcomes, it was reported that subjective fit reported the lowest relationship (Hoffman & Woehr, 2006). Future research into the antecedents of organizational citizenship behaviors should incorporate similar levels of analysis that examine the salience of proximal identification in the relationships between job satisfaction and extra-role and in-role activities. Furthermore, the use of proximal identification should examine the performance of subjective fit measures in order to determine if lower levels of analysis (team or unit) improve correlations between extra-role (helping, voice) and in-role behaviors. Subjective fit, measuring the perceptions of the person, may show improvements when applied to proximal and compatible levels of analysis.

An overall summary of the literature indicates that subjective measures of N-R fit using commensurate dimensions and response surface methodology provides the most information in explaining an outcome like job satisfaction. Furthermore, it is critical to include the importance of dimensions as a moderator to explain the relationship between N-R fit (or misfit) and job satisfaction. In order to gain a complete understanding of the relationship between N-R fit, N-R misfit (deficiency, excess) and the outcome, the researcher must include the effects of conservation, carryover, depletion, and interference as applied to each dimension relative to the job satisfaction. In order to gain a complete understanding of the relationship between N-R fit (both high, both low) and the outcome, the researcher must include seek theoretical support to explain the effect on job satisfaction. Progressing along the proposed framework, it is apparent that the strength of organizational identification is more apparent at lower levels of identity that connect with daily interaction and habitual relationships at the team or unit level. The strength of conceptualizing organizational identification at the lower level provides a more proximal and relevant theoretical linkage to N-R fit and its related outcome, job satisfaction. Organizational identification conceptualized at the lower level seems to represent an appropriate construct that represents a person's individual connection or "oneness" with the collective team or unit. Finally, the resulting in-role and organizational citizenship behaviors (extra-role) in the proposed framework represent strong relationships with job satisfaction and organizational identification conceptualized at the team or unit level. The measurement and examination of in-role and extra-role behaviors should be at a commensurate level of analysis with its antecedents. The inclusion of in-role behaviors will facilitate the isolation of extra-role behaviors. There is empirical evidence that demonstrates the relationship between job satisfaction and performance behaviors to include in-role and extra-role activities. There is less proof that organizational identification

conceptualized at the lowest level will serve as a mediator between job satisfaction and performance behaviors (extra-role and in-role).

Review of Military Studies

The breadth and depth of research that can be found referencing military populations is less diverse and, in many cases, more practical than theoretical. The major outcome of interest in the Army research efforts that are aligned with P-E fit, job satisfaction, organizational identification, and organizational citizenship behaviors are typically related to recruiting and retention. Furthermore, the P-E fit conceptualizations are largely concerned with performance measures associated with D-A fit. However, there are notable efforts within the Army research stream that have led to the relatively recent career continuance model developed by the U.S. Army Research Institute, in conjunction with Personnel Decisions Research Institute.

Motowidlo and colleagues (1976) addressed fundamental issues surrounding motivation, job satisfaction, and morale as applied to recruiting and retention of high-quality personnel. Two basic questions drove their research – what is it that motivates people, and how do environmental factors and individual needs determine behavior? These same two questions are specifically applicable to the current study. The authors provide an in-depth review of the literature and measurement instruments that were available at the time and they offer their review for future application. Interestingly, as applied to job satisfaction, the comprehensive review stresses the importance of the theory of need fulfillment and its focus on "the correspondence between individual's needs or desires and the presence of environmental characteristics conducive to need satisfaction." (Motowidlo et al., 1976, p. 31). The authors choose the Theory of Work Adjustment (Dawis, Lofquist, & Weiss, 1968) as the most comprehensive model to operationalize the theoretical construct described by need fulfillment.

Lal (1989) provided an empirical study to explain the quit/stay decisions of junior Army officers. The author hypothesized that the number of years an officer intends to serve in the Army depends upon satisfaction with military life, monetary compensation, promotion potential, source of commission, location of service, time overseas, and numerous demographics. The results from the first hypothesis suggested that the two most important factors which affect intent to serve were satisfaction with military life and promotion potential. The author also hypothesized that number of years of expected service and satisfaction with military life were jointly determined. The results from the second hypothesis suggested that officers who showed satisfaction with their current job, satisfaction with co-workers and their friendships, unit morale, personal freedom and job security displayed significant positive influence on satisfaction with military life.

Teplitzky (1991) constructed and tested a model focused on retention in a sample of junior officers which conceptualized four antecedents to propensity to stay in the Army. The four determinants included Army career prospects, organizational identification, anticipated work/family conflict, and years of service. The author also proposed that five additional variables (person-branch match, prior career orientation, current work satisfaction, operational support, and inspirational leadership) would have indirect effects on retention by operating through their influence on career prospects and organizational identification. Organizational identification illustrated the strongest positive effects on propensity to stay, and work/family conflict displayed the strongest negative effects on propensity to stay. Current work satisfaction and branch match were found to significantly affect Army career prospects which served as a mediator to the propensity to stay outcome. Furthermore, all the variables (prior career orientation, operational support, and inspirational leadership) hypothesized to affect

organizational identification were significant in their mediating role with the propensity to stay outcome.

Heffner & Gade (2003) constructed and tested a model focused on career intentions from a large sample of Special Operations service members from the Army, Navy, and Air Force. The study extended previous research on the affective and continuance components of organizational commitment associated with turnover intentions (Mathieu & Zajac, 1990; Sterling & Allen, 1983). The nested model hypothesized that the respondents' commitment would reveal a Special Operations affective commitment, a military affective commitment, and a military continuance commitment that would be differentiable. Furthermore, in accordance with the extant literature (Mueller & Lawler, 1990), the authors proposed that job satisfaction would directly influence affective commitment to the proximal collective (cf. Rusbult & Farrell, 1983), indirectly influence affective commitment to the distal collective through the proximal collective, and possibly have a direct influence on affective commitment to the distal collective. Mueller & Lawler (1999, p. 329) explained that "the more proximate unit will always possess an 'interaction advantage' … and will affect commitment to the local unit (through job satisfaction) more strongly than commitment to a more distant unit." The results indicated that the components of commitment (Special Operations affective commitment, military affective commitment, and a military continuance commitment) were distinct. Furthermore, the analyses supported the proposed model as explained by Mueller & Lawler's (1999) theory and also illustrated that organizational commitment is a mediating construct between commitment to collectives and organizationally relevant outcome behaviors (Hunt & Morgan, 1994). Specific to this model, it was shown that military affective commitment mediated the relationship between

career intentions and both satisfaction with the military and Special Operations affective commitment (Heffner & Gade, 2003).

Schneider and colleagues (2011) provided the most recent and most comprehensive study of officer retention through an empirical test of the career continuance model previously mentioned at the start of this section. The authors conducted a comprehensive literature review which was also supplemented by qualitative focus groups and interviews with various officers (lieutenants to colonels) across numerous installations in the United States. The career continuance model was empirically tested using existing officer surveys and tracking databases that were modified in order to construct the measures used in the model. Within the model, the primary determinant of retention was organizational commitment to include affective commitment, normative commitment, and investments. There were two mediators (thoughts of staying/leaving and intention to stay/leave) between organizational commitment and retention. Finally, the determinants of organizational commitment were: person variables, evaluations of the context (perceived organizational support, overall job satisfaction, perceived family satisfaction/support), and health (psychological and physiological). In the empirical analysis, Schneider and colleagues (2011) found a moderating effect of time left in service obligation on the relationship between intent to leave and separation behavior; a moderating effect of perceived economic constraint between thoughts of staying/leaving and intention to stay/leave; partial mediation from thoughts of leaving in the relationship between organizational commitment and intent to stay/leave; and a direct effect between the critical event of having a first child on thoughts of staying/leaving. Given the complexity of the model, the authors do not recommend to initiate policy implementation. However, there is a call for further research that can develop, test, and inform the STAY (Strategy to Enhance Retention) program.

Strengths and Recommended Improvements

In summary, the previous military studies indicate that job satisfaction, organizational identification, and organizational commitment play an important role in previous retention frameworks. The findings suggest that organizational identification and a conceptualization of organizational commitment at a lower level of analysis displays a strong relation to propensity to stay in the service and job satisfaction, respectively. The career continuance model developed as part of the Strategy to Enhance Retention (STAY) used previous survey data to create constructs. Therefore, the design of this initiative starts with data that was not specifically collected with the outcomes in mind. While the information collected in the former surveys is informative, it will be harder to construct N-R fit studies that maintain the integrity of the person, the environment, and the expected outcomes.

The previous military studies do not measure motivations, needs, or desires at the facet level. Many of the predictors of job satisfaction and other outcomes are solely based on extrinsic motivations or more practical support like retirement benefits, educational benefits, facilities, and other possible demographics. In order to provide more information about the motivations of the officer corps, this study is attempting to gather information from the individual and apply it to their most proximal team or unit.

CHAPTER 3: THEORY AND HYPOTHESES DEVELOPMENT

Introduction

The goal of this chapter is to build the theoretical linkages required to construct testable hypotheses to inform the research questions that motivated this study. The proposed framework is the result of an extensive amount of research from previous scholars. In order to extend the previous efforts, this study has incorporated many recommendations that can hopefully add to the overall body of knowledge.

In the initial design of this research, the content dimensions that comprised the measurement instrument were identified in a pilot study from the population of interest. The content dimensions, their definitions, and the associated items were reviewed and manipulated to ensure consistency. The initial measurement instrument was administered to a similar population and subsequently revised prior to final data collection. The measurement instrument was specifically designed to collect data using commensurate dimensions that could be used in the application of subjective N-R fit that emphasizes the perspective of the person. The measurement instrument also incorporated previous formatting improvements that facilitated ease of discrepancy measures in relation to the specified items that were used to identify content dimensions. The outcome variables used proven measures that were adapted to the specific population. The resulting data set has provided the appropriate information to conduct thorough analysis.

The development of the hypotheses will follow the theoretical linkages that were surmised from the previous literature review. The analysis of the data uses response surface

methodology to maintain the integrity of the needs, rewards, and outcomes which typify P-E fit research. The importance of each content dimension is set as a moderator of the relationship between N-R fit and the expected outcome. In order to gain a complete understanding of the relationship between N-R fit misfit (deficiency, excess) and the outcome, the construction of hypotheses will include the effects of conservation, carryover, depletion, and interference as applied to each dimension relative to the expected outcome. In order to gain a complete understanding of the relationship between N-R fit (both high, both low) and the outcome, the construction of hypotheses will also include theoretical support to explain the effect on the expected outcome. The interaction between the individual and the environment on expected outcomes is conceptualized at the lowest level of analysis to facilitate the most proximal predictors.

Review Content Dimensions

There are 10 distinct content dimensions that will be used to examine job satisfaction. The content dimensions represent job characteristics that exist in current Army career paths and they also represent job characteristics that are attractive to the population of Army officers. A great deal of effort was invested to establish nominal equivalence in the items that were used to identify each content dimension. The language describing each construct expresses both the needs of the officer and the rewards of a job at the team or unit level. The selection process for the content dimensions is explained in the next chapter. The final 10 content dimensions are as follows:

1. Leadership Opportunity – The chance to be in charge and direct the actions of a group organized to accomplish a common goal.

2. Autonomy – The ability to determine how to accomplish a goal without external control or influence.

3. Meaningful Purpose – The application of personal effort towards a significant cause that contributes to the greater good for those you represent.

4. Recognition of Potential – The recognition and rewards that come from successful contributions are acknowledged with increasing levels of responsibility and authority.

5. Compensation/Benefits – The financial compensation package that is offered to employees in return for their production within an organization.

6. Variety – A work environment that provides an assortment of tasks, locations, and goals that result in diversity.

7. Teammates – The group of people in the work environment form cohesive bonds that exhibit mutual support and trust between individuals.

8. Challenge – A demanding or stimulating work environment that requires an individual or team to test themselves.

9. Way of Life – The result of balancing work requirements, family obligations, and personal aspirations towards an acceptable equilibrium.

10. Inspirational Leadership – The degree to which senior decision makers foster a positive climate that is supportive and inspirational.

Develop Relationship between N-R Fit & Job Satisfaction Hypotheses (H1-H10 A, B)

Job satisfaction is the primary outcome of interest. Job satisfaction is defined as "a positive (or negative) evaluative judgment one makes about one's job or job situation" (Weiss 2002, p. 175). The relationship between N-R fit and job satisfaction is more complex than it appears. The evaluation of congruence in N-R fit is commonly categorized with three possible

outcomes. The first two cases address N-R misfit, the misfit of needs and rewards (deficiency, R<N; and excess, R>N), while the third case addresses N-R fit, the fit of needs and rewards (R=N).

Job Satisfaction as Rewards Increase toward Needs. The first instance of N-R misfit addresses deficiency along the misfit line where rewards are less than needs (R<N). Theories of job satisfaction (Locke, 1976, Rice et al., 1982) and person-environment fit (Edwards et al., 1998; French et al., 1982) specify that job satisfaction will be relatively lower when rewards fall short of relative needs. However, as rewards increase toward relative needs, satisfaction is expected to improve. This interaction is based on the premise that insufficient rewards reflect unfulfilled needs, desires, or goals and this discrepancy creates tension and negative affect which reduces job satisfaction (Dawis & Lofquist, 1984; Diener, 1984; Lazurus & Folkman, 1984; Locke, 1969; Murray, 1938). The premise also recognizes that as rewards increase toward needs, the discrepancy is resolved and the person will gain a greater sense of fulfillment which should translate into increased job satisfaction (Harrison, 1978).

Job Satisfaction as Rewards Exceed Needs. The second instance of N-R misfit addresses excess along the misfit line where rewards are greater than needs (R>N). Although P-E fit theory suggests that job satisfaction improves as rewards increase toward needs, it also states that satisfaction may increase, decrease, or remain constant as rewards exceed needs (French et al., 1982; Harrison, 1978). The ambiguity in excess rewards depends on the effects of excess amounts on other need dimensions, or on the focal need dimension at a later time (Edwards, 1996). In order to properly predict the effect of excess rewards on an expected outcome, Edwards (1996) organized the effects of excess rewards with four processes – carryover, conservation and interference, depletion.

Carryover and conservation indicate that excess rewards will increase the expected outcome. Carryover occurs when excess rewards in one dimension may help fulfill needs in other dimensions. Conservation occurs when excess rewards are retained to satisfy the current dimension in the future. Depending on the content dimension being evaluated, if conservation or carryover is applicable then it is expected that job satisfaction will increase. Conservation and carryover result in a monotonic relationship between N-R misfit and job satisfaction, such that job satisfaction improves as rewards increase toward needs and continues to increase as rewards exceed needs (Rice, Phillips, & McFarlin, 1990); Sweeney, McFarlin, & Inderrieden, 1990).

Alternatively, depletion and interference indicate that excess rewards will decrease the expected outcome. Depletion occurs when excess rewards impede future fulfillment of needs on the current dimension. Interference occurs when excess rewards in one dimension inhibit needs fulfillment in other dimensions. Depending on the content dimension being evaluated, if depletion or interference is applicable then it is expected that job satisfaction will decrease. Depletion and interference result in a symmetric relationship between N-R misfit and job satisfaction, such that job satisfaction decreases as rewards exceed or fall short of needs (Locke, 1969; Rice et al., 1985).

The remaining consideration in excess rewards is the case where excess rewards do not influence N-R fit on other content dimensions or future N-R fit in the same content dimension. In this instance, job satisfaction is expected to remain constant as rewards exceed needs, and the relationship will approximate the level of job satisfaction found in perfect N-R fit. This case results in an asymptotic relationship between N-R misfit and job satisfaction, such that job satisfaction increases as rewards approach needs and remains constant as rewards exceed needs (French et al., 1982; Harrison, 1978; Rice et al., 1985).

In summary, as excess rewards are considered in terms of carryover and conservation, one would expect that excess rewards can assist in maintaining job satisfaction; whereas, in terms of interference and depletion, excess rewards may hinder fulfillment in job satisfaction. Also, in the remaining case of excess rewards, it is possible that excess rewards do not influence N-R fit on other content dimensions or future N-R fit in the same dimension and job satisfaction will remain constant.

Job Satisfaction for Low versus High Rewards and Needs. The third instance addresses N-R fit along the fit line where rewards equal needs (R=N). Previous research has shown that higher levels of satisfaction are found when the needs and rewards derived from a job characteristic are both high rather than both low (Edwards et al., 1999; Edwards, 2002; Edwards & Harrison, 1993). There are two common descriptions in this case (Edwards & Rothbard, 1999). First, high rewards in one content dimension could possibly create rewards that fulfill needs in other content dimensions and consequently increase job satisfaction. This explanation has similarities to the carryover concept described above, but the justification in this scenario refers to the effects of high rewards when rewards and needs are equal, rather than the case in carryover which describes a scenario where rewards exceed needs. Second, securing rewards that fulfill lofty needs could result in a sense of accomplishment where high needs describe ambitious aspirations or high goals. The sense of accomplishment may represent a version of a reward that is fulfilling a need for mastery, competence, and self-worth (Harrison, 1978; Morse, 1975; White, 1959). Resolving the ambiguity in the scenario of perfect N-R fit (R=N), when both rewards and needs are high (high, high) or when both rewards and needs are low (low, low), requires theoretical applications that are specific to the content dimension and the expected

outcome. The relationship between perfect N-R fit (R=N) reporting (high, high and low, low) and job satisfaction requires theoretical application relative to the specific content dimension.

Theoretical Support in Applying Needs and Rewards. In order to facilitate a theoretical underpinning in the explanation of ambiguities that result in N-R fit analysis, it is important to recognize previous research that explains the underlying motivations that are characteristic to most people. It is equally important to customize content dimensions that are specific to the population under analysis. The construction of the measurement instrument used in this study (Officer Needs-Rewards Survey) was adapted from previous measures to include the Work Values Inventory (WVI; Super, 1970), the Work Aspect Preference Scale (WAPS; Pryor, 1983), the Minnesota Importance Questionnaire (MIQ; Gay et al., 1971), the Work Values Survey (WVS; Cable & Edwards, 2002), and the basic value theory provided by Schwartz (1992, 2012). The theoretical linkages used in the construction of the following hypotheses will incorporate research from each of these previous efforts in relation to job satisfaction. The details of survey construction will be covered in the next chapter.

The categorization of the content dimensions were adapted into a military context from naming conventions that are similar to the widely accepted Occupational Information Network (O*NET) and the Super (1970) WVI taxonomy. Compensation/Benefits, Way of Life, Variety, and Challenge are directly linked to Working Conditions within the O*NET description, and are further explained within the Economic Return, Way of Life, Variety, and Stimulation descriptions within WVI. Leadership Opportunity and Recognition of Potential are directly linked to Recognition and Achievement within the O*NET description, and are further explained within the Management, Achievement, and Prestige descriptions within WVI. Meaningful Purpose and Teammates are directly linked to Relationships within the O*NET description, and

are further explained within the Altruism and Associated descriptions within WVI. Autonomy is directly linked to Independence within the O*NET description, and is further explained by the Independence description within WVI. Inspirational Leadership is directly linked to Support in the O*NET description, and is further explained by the Supervisory Relations description within WVI. The grouping of content dimensions represent both extrinsic and intrinsic needs and rewards that represent common job characteristics that are attractive to officers and available within the Army (Amabile, et al., 1994).

In addition to the more applied measures previously described, the construct of hypotheses also incorporates the basic value theory proposed by Schwartz (1992, 2012). The basic value theory represents a comprehensive review of the values that are common to individuals across many countries, cultures, and climates. In the simplest interpretation, values within this theory serve as the motivational base for attitudes and behavior (Schwartz, 2012). Schwartz (2012) uses six features to describe values: 1) values are beliefs, 2) values refer to desirable goals, 3) values transcend specific actions/situations, 4) values serve as standards or criteria, 5) values are ordered by importance, and 6) the relative importance of multiple values guide action. Schwartz (1992) proposed a theoretical model that outlined a continuum of related motivations that are categorized in an opposing manner where self-transcendence is the antagonist of self-enhancement and conservation is the antagonist of openness to change. The circular model uses the four categories to align ten motivational types. Self-transcendence is comprised of universalism and benevolence, and its opposing category, self-enhancement is comprised of power, achievement, and hedonism. Conservation is comprised of security, conformity, and tradition, while its opposing category, openness to change is comprised of self-direction, stimulation, and hedonism (hedonism is shared with self-enhancement). The

theoretical model is described as a continuum of related motivations that results in many shared emphases. For example, benevolence and conformity are part of self-transcendence and conservation, but they share many motivational bases that imply a singular devotion to one's group (Schwartz, 2012). The theoretical model of relations among the ten motivational types provides a common set of values and predicted relationships.

Hypotheses Development by Content Dimension for N-R Fit. The categorization of the relationship between the needs of a person, the rewards of an environment, and a subsequent outcome requires three dimensional analyses. Within these analyses, the congruence of needs and rewards will be classified in accordance with the aforementioned descriptions: N-R fit or N-R misfit. The following hypotheses consider the N-R fit or N-R misfit of specific content dimensions applied to job satisfaction. The first hypothesis in each content dimension considers the two cases of N-R misfit (deficiency, R<N; and excess, R>N), while the second hypothesis considers the case of N-R fit (R=N).

Leadership Opportunity. The first dimension is leadership opportunity, which is defined as *the chance to be in charge and direct the actions of a group organized to accomplish a common goal.* Leadership opportunity is associated with management and achievement, and is explained as "work which allows one the chance to lay out plans and accomplish a common goal" (Super, 1970, p. 9). Given the definition, it is appropriate to think of leadership opportunity in terms of self enhancement (power) and conservation (security and tradition) from the Schwartz (2012) basic values theory. With the assignment of a leader, there is an implicit differentiation in power among the group (Parsons, 1951). A person who is willing to exercise control over people and resources may perceive this dimension as a need. Additionally, service in the military signifies a desire to provide security for their proximal social groups (family, local

town) and even wider groups (national security) (Kluckhohn, 1951; Maslow, 1965). Finally, the willingness to accept a leadership opportunity in the Army presupposes that the volunteer will subordinate self-serving interests to the socially imposed expectations of the group (Parsons, 1951). The combination of security and tradition are commonly related to maintenance of existing social arrangements that reduce uncertainty (Schwartz, 2012). A person who joins the military and accept the norms of the service may perceive this dimension as a need. The need for leadership opportunity implies that job satisfaction will increase as the person gains leadership positions; however, it also infers responsibility for group success and failure which could lead to a decrease in job satisfaction.

MISFIT – Deficiency. In the case of deficiency (R<N) within the leadership opportunity dimension, one would expect that satisfaction should increase as rewards increase toward needs. As noted earlier, this effect in deficient N-R misfit is expected for all dimensions (French et al., 1982; Harrison, 1978). The need for a leadership opportunity is expected to correlate with "work which gives one standing in the eyes of others and evokes respect" (Super, 1970, p. 9). As the rewards of leadership opportunity increase toward the needs of the officer, one would expect increased job satisfaction.

MISFIT – Excess. In the case of excess (R>N) within the leadership opportunity dimension, it is appropriate to consider the effects from possible carryover, conservation, interference and depletion. Many of the characteristics that describe leadership potential have positive overlap with the need for recognition of potential, challenge, and autonomy. Where there is positive overlap between dimensions, it is expected that conservation would apply. The characteristics that describe a need for leadership opportunity may have negative overlap with the characteristics that typify way of life and teammates. Where there is negative overlap, it is

expected that interference may occur. As carryover and depletion are concerned, it is expected that leadership opportunity may have either positive or negative effects in influencing future leadership opportunities.

Carryover would occur if excess rewards in the leadership opportunity dimension could assist in fulfilling needs in other dimensions. In the case of excess leadership opportunity, one would expect exposure to other dimensions like autonomy, recognition of potential and challenge. Increased leadership opportunity may result in larger decision making power, increased visibility (which could be good or bad, depending on success or failure), and larger responsibility for organizational outcomes. In this content dimension, one would expect strong carryover effects from excess rewards. Excess rewards in leadership opportunity could assist in fulfilling needs in autonomy, recognition of potential, and challenge which could lead to an increase in job satisfaction.

Conservation would occur if excess rewards in the leadership opportunity dimension are retained to satisfy future leadership opportunity needs. Conservation of leadership opportunity seems highly plausible. Being in charge at one point in time can provide the latitude and influence to create future opportunities to be in charge. Excess rewards in leadership opportunity could facilitate an increase in future leadership opportunity and an increase in job satisfaction.

Interference would occur if excess rewards in the leadership opportunity dimension inhibits need fulfillment in other dimensions. In the leadership opportunity dimension, it is expected that excess rewards could affect the teammates and way of life content dimensions. The increased responsibility and time requirements associated with excess rewards in leadership opportunity could limit the amount of individual time spent with each teammate and activities outside of the work environment. Excess leadership opportunity, if acted upon, could interfere

with needs fulfillment in the teammates and way of life content dimensions which could then lead to a decrease in job satisfaction.

Depletion would occur if excess rewards in the leadership opportunity dimension impede future leadership opportunity needs. The depletion concept should apply to leadership opportunity. If leadership opportunity is a fixed sum that is only allocated to a certain number of people, then taking excess leadership opportunity could undermine future availability. If the first chance to take a leadership opportunity is not in the specific area of interest, then quickly assuming a leadership role could prohibit a future opportunity that matches the person's area of interest. Therefore, an excess in leadership opportunity could restrict future leadership opportunity and decrease job satisfaction.

H1A (MISFIT): For leadership opportunity, satisfaction will increase as rewards increase toward needs and will continue to increase as rewards exceed needs, decreasing only when excess rewards are substantial.

FIT. In the case of fit (R=N) within the leadership opportunity dimension, one would expect that people who want and receive high levels of leadership opportunity are likely to believe that they set high aspirations and achieved them. This relationship in itself can be rewarding for needs such as self-efficacy and self-actualization (Alderfer, 1972; Maslow, 1954; Rokeach, 1973). It is also common that high needs and rewards within one dimension are correlated with high needs and rewards in other dimensions (Harrison, 1978). The relationship between high needs and rewards across multiple dimensions contributes to the fulfillment of needs for growth and self-actualization (Edward & Shipp, 2007). As applied to leadership opportunity, it is expected that the desire for high rewards and high needs will result in more job satisfaction than low rewards and low needs.

H1B (FIT): For leadership opportunity, satisfaction will be higher when rewards and needs are both high than when both are low.

Autonomy. The second dimension is autonomy, which is defined as *the ability to determine how to accomplish a goal without external control or influence.* Autonomy is associated with independence and is explained to permit flexibility "which permits one to work in his [sic] own way" (Super, 1970, p. 9). Given the definition, it is appropriate to think of autonomy in relation to openness to change (self-direction) from the Schwartz (2012) basic values theory. The self-direction value is characterized by independent thought and action that are derived from a need for control and mastery (Bandura, 1977; Deci, 1975). The need for autonomy is typically associated with a desire for independence through multiple interactions where the person feels they have gained respect (Kohn & Schooler, 1983). Autonomy is described as a fundamental human motive because it refers to the degree to which a person can influence the conduct of their own actions (Bolton, 1980; Ryff & Keyes, 1995). The need for autonomy implies that job satisfaction will increase as the person gains more independence; however, it also infers that they may operate with a lack of guidance and may be held solely responsible for potential failure.

MISFIT – Deficiency. In the case of deficiency (R<N) within the autonomy dimension, one would expect that satisfaction should increase as rewards increase toward needs. If an individual has a need for increased autonomy, then it is expected that they have confidence in their abilities and are willing to accept responsibility for outcomes. If there is a deficiency in autonomy, one would expect an increase in job satisfaction as the rewards of more autonomy increase toward the needs of the officer.

MISFIT – Excess. In the case of excess (R>N) within the autonomy dimension, it is appropriate to consider the effects from carryover, conservation, interference and depletion. Many of the characteristics that are descriptive of autonomy have positive overlap with challenge and the achievement portion of recognition of potential. When there is positive overlap between dimensions, it is expected that conservation will apply. In the case of autonomy, the reverse could also be true if increased independence results in negative outcomes in challenge and recognition of potential – so, interference may occur as well. The characteristics that describe a need for autonomy also require successful outcomes to maintain autonomy. The relationship with success or failure that comes with independence implies that success or failure may result in less autonomy in the future. If future autonomy is at risk, then carryover or depletion may occur.

Carryover would occur if excess rewards in the autonomy dimension could assist in fulfilling needs in other dimensions. Excess autonomy can go beyond the obvious need for control and provide a platform to initiate changes that fulfill needs in other dimensions like recognition of potential and challenge. If increased decision making power results in successful outcomes, then excess autonomy can result in increased responsibility for outcomes and ultimately increases in recognition of potential. Furthermore, successful outcomes deriving from excess rewards in autonomy could result in the flexibility to shape a more stimulating environment applied to the challenge content dimension. Within autonomy, one would expect strong carryover effects from excess rewards. Excess rewards in autonomy could assist in fulfilling needs in recognition of potential and challenge which could also lead to an increase in job satisfaction.

Conservation would occur if excess rewards in the autonomy dimension are retained to satisfy future autonomy needs. Conservation of autonomy seems possible. Given successful

outcomes, the flexibility to act with less external control can provide the opportunity to create future autonomy. Excess rewards in current autonomy could facilitate an increase in future autonomy and an increase in job satisfaction.

Interference would occur if excess rewards in the autonomy dimension prohibits need fulfillment in other dimensions. There are no apparent reasons why excess in the autonomy dimension would limit need fulfillment in other dimensions. Excess rewards in the autonomy content dimension is not expected to interfere with need fulfillment in other content dimensions and should not affect job satisfaction.

Depletion would occur if excess rewards in the autonomy dimension impede future autonomy needs. Excess autonomy that results in failure may result in less autonomy in the future. An excess in autonomy results in less guidance and increased independence. An individual that enjoys excess autonomy has no one else to blame when goals are not achieved. Therefore, a large excess in autonomy could restrict future autonomy and decrease job satisfaction.

H2A (MISFIT): For autonomy, satisfaction will increase as rewards increase toward needs and will continue to increase as rewards exceed needs, decreasing only when excess rewards are large.

FIT. In the case of fit (R=N) within the autonomy dimension, one would expect that people who want and receive high levels of autonomy are signaling that they are confident in their abilities. The relationship of wanting and receiving high levels of autonomy can reveal a desire to fulfill high standards which can be rewarding for needs such as self-efficacy and self-actualization (Alderfer, 1972; Maslow, 1954; Rokeach, 1973). Furthermore, research has shown that high demands coupled with high control enable the person to cope successfully with

challenging situations, leading to increased job satisfaction (Karasek & Theorell, 1990). As applied to autonomy, it is expected that the desire for high rewards and high needs will result in more job satisfaction than low rewards and low needs.

H2B (FIT): For autonomy, satisfaction will be higher when rewards and needs are both high than when both are low.

Meaningful Purpose. The third dimension is meaningful purpose, which is defined as *the application of personal effort towards a significant cause that contributes to the greater good for those you represent.* Meaningful purpose is associated with altruism and is explained as "work which enables one to contribute to the welfare of others" (Super, 1970, p. 8). Given the definition, it is appropriate to think of meaningful purpose in relation to self-transcendence (universalism and benevolence) from the Schwartz (2012) basic value theory. The combination of universalism and benevolence as described by the self-transcendence value is characterized by enhancement of others and transcendence of selfish interests. Benevolence is indicative of a voluntary concern for others, a need for affiliation, and greater meaning in life. The universalism concept is built on a desire to protect others and defend the welfare of those in the larger society and world. The need for meaningful purpose implies that the person's job satisfaction will increase as they contribute to efforts that go beyond their own selfish interests; however, it also infers that their more proximal relationships may suffer as a consequence.

MISFIT – Deficiency. In the case of deficiency (R<N) within the meaningful purpose dimension, one would expect that satisfaction should increase as rewards increase toward needs. The characteristics of meaningful purpose facilitate strong intrinsic needs that are fulfilled when performing actions that benefit the welfare of others. As the rewards of meaningful purpose increase toward the needs of the officer, one would expect increased job satisfaction.

MISFIT – Excess. In the case of excess (R>N) within the meaningful purpose dimension, it is appropriate to consider the effects from carryover, conservation, interference and depletion. Many of the characteristics that describe meaningful purpose have the potential to overlap with the teammates and way of life content dimensions. The underlying themes in the meaningful purpose content dimension describe a "calling" or commitment to a cause that is bigger than the individual. Individuals who share the same commitment are expected to build cohesive interpersonal relationships towards their group's common cause. Where there is positive overlap between dimensions, it is expected that conservation would apply. The commitment to a greater cause, as applied to excess rewards, can also have detrimental effects on the individual's way of life. If the family of the individual does not share the same commitment, then the individual's commitment to the excess rewards from meaningful purpose could be interpreted as neglect for the family. With this type of negative overlap between dimensions, it is expected that interference would apply.

Carryover would occur if excess rewards in the meaningful purpose dimension could assist in fulfilling needs in other dimensions. In the case of excess meaningful purpose, one would expect exposure to the teammates content dimension. Excess rewards in meaningful purpose could mean higher cohesion with teammates. In this content dimension, one would expect carryover effects from excess rewards. Excess rewards in meaningful purpose can assist in fulfilling needs in the teammates content dimensions which could lead to an increase in job satisfaction.

Conservation would occur if excess rewards in the meaningful purpose dimension could be retained to satisfy future meaningful purpose needs. Conservation of meaningful purpose does not seem plausible. Contributions to a meaningful purpose at one point in time do not

provide any levers to create future opportunities at meaningful purpose. Excess rewards in meaningful purpose do not facilitate an increase in future opportunities at meaningful purpose so there is no expected effect on job satisfaction.

Interference would occur if excess rewards in the meaningful purpose dimension prohibits need fulfillment in other dimensions. In the meaningful purpose dimension, it is expected that excess rewards could affect way of life. Individuals seeking meaningful purpose may internalize their commitment to an extent that could result in an imbalance in their way of life. Increased meaningful purpose could result in a competition between selfless contributions to the cause and balance in the work/family equilibrium described in the way of life content dimension. Increased meaningful purpose found in the commitment to a larger cause could interfere with needs fulfillment in the more proximal way of life content dimension and ultimately to a decrease in job satisfaction.

Depletion would occur if excess rewards in the meaningful purpose dimension impede future meaningful purpose need fulfillment. The depletion concept does not seem to apply to meaningful purpose. An excess in meaningful purpose does not restrict future meaningful purpose and should not affect job satisfaction.

H3A (MISFIT): For meaningful purpose, satisfaction will increase as rewards increase toward needs and will continue to increase as rewards exceed needs, decreasing only when excess rewards are large.

FIT. In the case of fit (R=N) within the meaningful purpose dimension, one would expect that people who want and receive high levels of meaningful purpose desire to contribute to a significant cause that provides for the greater good. The high cost of contributing to the greater good requires an equally strong commitment from participants. The alignment of

rewards from increased meaningful purpose with the need for meaningful purpose results in high satisfaction. The relationship of wanting and receiving high levels of meaningful purpose reveals a desire to fulfill high standards which can be rewarding for needs such as self-efficacy and self-actualization (Alderfer, 1972; Maslow, 1954; Rokeach, 1973). As applied to meaningful purpose, it is expected that the desire for high rewards and high needs will result in more job satisfaction than low rewards and low needs.

H3B (FIT): For meaningful purpose, satisfaction will be higher when rewards and needs are both high than when both are low.

Recognition of Potential. The fourth dimension is recognition of potential, which is described by *the recognition and rewards that come from successful contributions that are acknowledged with increasing levels of responsibility and authority.* Recognition of potential is associated with prestige and achievement, and is explained as merit driven acknowledgment "which gives one standing in the eyes of others" (Super, 1970, p. 9). Given the definition, it is appropriate to think of recognition of potential in relation to self-enhancement (power and achievement) from the Schwartz (2012) basic value theory. The combination of power and achievement as described by the self-enhancement value is characterized by social superiority and esteem (Schwartz, 2012). Power is indicative of a desire that emphasizes authority and attainment of dominant positions that carry social status and prestige. Achievement is indicative of personal success that demonstrates competence according to social standards. The need for recognition of potential implies that the person's job satisfaction will increase as they are recognized for their successful contributions to the organization; however, it also infers that the recognition is perceived as fair by other members.

MISFIT – Deficiency. In the case of deficiency (R<N) within the recognition of potential dimension, one would expect that job satisfaction should increase as rewards increase toward needs. The characteristics of recognition of potential serve as a marker for the ambitions of an individual. This dimension is focused on merit driven promotions which are based in a fair environment. An individual with deficiency in recognition of potential implies that they are deserving of the recognition, but have not received the rewards. As the rewards from recognition of potential increase toward the needs of the officer, one would expect increased job satisfaction.

MISFIT – Excess. In the case of excess (R>N) within the recognition of potential dimension, it is appropriate to consider the effects from carryover, conservation, interference and depletion. Many of the characteristics that describe recognition of potential have the potential to overlap with leadership opportunity and teammates. Positive overlap between recognition of potential and leadership opportunity could result in carryover, while negative overlap could exist between recognition of potential and teammates to cause interference. It is also easy to see that there is momentum within recognition of potential that could positively or negatively affect future rewards within the same content dimension to result in conservation and depletion.

Carryover would occur if excess rewards in the recognition of potential dimension could assist in fulfilling needs in other dimensions. In the case of excess recognition of potential, one would expect exposure to leadership opportunity. Increased recognition of potential may result in increased visibility and possible promotion. In this content dimension, one would expect carryover effects from excess rewards. Excess rewards in recognition of potential could assist in fulfilling the expectation of leadership opportunity which could lead to an increase in job satisfaction.

Conservation would occur if excess rewards in the recognition of potential dimension are retained to satisfy future recognition of potential needs. Conservation of recognition of potential seems possible. Being recognized for successful contributions at one point in time could seemingly produce another opportunity that may result in future recognition. Excess rewards in recognition of potential could facilitate an increase in future recognition and an increase in job satisfaction.

Interference would occur if excess rewards in the recognition of potential dimension inhibits need fulfillment in other dimensions. In the recognition of potential dimension, it is expected that excess rewards could affect teammates. The increase in recognition could be perceived as favoritism by other team members if the recognition is not perceived as fair or deserved. The recognition could reduce cohesion and mutual support described in the teammates content dimension. Excess rewards could interfere with needs fulfillment in the teammates content dimension which could lead to a decrease in job satisfaction.

Depletion would occur if excess rewards in the recognition of potential dimension impede future recognition of potential needs. The depletion concept seems to apply to recognition of potential. If there is a large excess of recognition given to an employee in the present, then a supervisor may bypass that individual in the future so other subordinates receive some praise. Therefore, a large excess in recognition of potential could restrict future recognition and decrease job satisfaction.

H4A (MISFIT): For recognition of potential, satisfaction will increase as rewards increase toward needs and will continue to increase as rewards exceed needs, decreasing only when excess rewards are substantial.

FIT. In the case of fit (R=N) within the recognition of potential dimension, one would expect that people who want and receive high levels of recognition are likely to believe that they set high aspirations and are appropriately recognized as they meet their goals. This relationship in itself can be rewarding for needs such as self-efficacy and self-actualization (Alderfer, 1972; Maslow, 1954; Rokeach, 1973). However, it can be argued that seeking recognition of potential, rather than seeking to assist the team in getting to a common goal have different motivations. This content dimension's definition assumes that the successful contributions are fairly evaluated and subsequent recognition follows. However, setting a goal to achieve recognition is probably not socially acceptable. In fact, most people probably display some humility when faced with the question about the need to be recognized. Therefore, reporting a high need for recognition of potential may not result increased job satisfaction. As applied to recognition of potential, it is expected that the desire for high rewards and high needs will result in more job satisfaction than low rewards and low needs.

H4B (FIT): For recognition of potential, satisfaction will be higher when rewards and needs are both high than when both are low.

Compensation/Benefits. The fifth dimension is compensation/benefits, which is defined as *the financial compensation package that is offered to employees in return for their production within an organization.* Compensation/Benefits is associated with economic returns in the form of income and other benefits that result from employment, and is explained as "work which pays well and enables one to have the things he [sic] wants" (Super, 1970, p. 9). Given the definition, it is appropriate to think of compensation/benefits in relation to conservation (security) and self-enhancement (power) from the Schwartz (2012) basic value theory. The combination of security and power is characterized by a need to avoid or overcome threats by controlling resources

(Schwartz, 2012). Security is indicative of stability and safety for the individual and their family. Power emphasizes the preservation of a dominant position which can include wealth and other methods of leverage. The need for compensation/benefits implies that the person's job satisfaction will increase as their financial compensation and benefits increase.

MISFIT – Deficiency. In the case of deficiency (R<N) within the compensation/benefits dimension, one would expect that satisfaction should increase as rewards increase toward needs. The characteristics of compensation/benefits include the purest form of extrinsic value to the officer. If an individual's financial package does not meet their expectations, then increased compensation/benefits will assist in resolving the discrepancy. As the rewards of compensation/benefits increase toward the needs of the officer, one would expect increased job satisfaction.

MISFIT – Excess. In the case of excess (R>N) within the compensation/benefits dimension, it is appropriate to consider the effects from carryover, conservation, interference and depletion. The characteristics that accompany excess compensation/benefits are most noticeable in the way of life content dimension. Excess compensation/benefits could illustrate carryover effects in the way of life content dimension. Also, excess rewards in compensation/benefits illustrate the concept of conservation in its purest form because money (and retirement benefits) can be saved for use as future compensation/benefits.

Carryover would occur if excess rewards in the compensation/benefits dimension could assist in fulfilling needs in other dimensions. In the case of excess compensation/benefits, one would expect exposure to way of life. Increased compensation/benefits may result in an increased capability to achieve personal aspirations outside of the work environment. In this content dimension, one would expect carryover effects from excess rewards. Excess rewards in

compensation/benefits could assist in fulfilling personal aspirations which could lead to an increase in job satisfaction.

Conservation would occur if excess rewards in the compensation/benefits dimension are retained to satisfy future compensation/benefits for need fulfillment. Conservation of compensation/benefits seems possible because there is an apparent monetary value. The flexibility to invest current compensation or to invest military service for retirement benefits can provide the opportunity to fulfill future monetary requirements. Excess rewards in current compensation/benefits could facilitate an increase in future financial freedom and an increase in job satisfaction.

Interference would occur if excess rewards in the compensation/benefits dimension prohibits need fulfillment in other dimensions. There are no apparent reasons why excess in the compensation/benefits dimension would limit need fulfillment in other dimensions. Excess rewards in the compensation/benefits dimension is not expected to interfere with need fulfillment in other content dimensions and should not affect job satisfaction.

Depletion would occur if excess rewards in the compensation/benefits dimension impede future compensation/benefits need fulfillment. The depletion concept does not seem to apply to compensation/benefits. An excess in compensation/benefits does not restrict future compensation/benefits and should not affect job satisfaction.

H5A (MISFIT): For compensation/benefits, satisfaction will increase as rewards increase toward needs and will continue to increase as rewards exceed needs.

FIT. In the case of fit (R=N) within the compensation/benefits dimension, one would expect that people who want and receive high levels of compensation/benefits are likely to believe that they are appropriately remunerated for their efforts. High performing individuals

expect pay that is commensurate with their contributions. However, the effect in compensation/benefits may not result in extreme discrepancies between the high rewards, high needs scenario and the low rewards, low needs scenario. It can be argued that the military profession is not a career that attracts individuals who seek tremendous financial wealth, so the effects in this dimension may not display large changes. As applied to compensation/benefits, it is expected that the desire for high rewards and high needs will result in more job satisfaction than low rewards and low needs.

H5B (FIT): For compensation/benefits, satisfaction will be slightly higher when rewards and needs are both high than when both are low.

Variety. The sixth dimension is variety, which is defined as *a work environment that provides an assortment of tasks, locations, and goals that result in diversity.* Variety is associated with "work that provides an opportunity to do different types of jobs" (Super, 1970, p. 10). Specifically, the opportunity provides stimulation that involves less mundane tasks and is exemplified by diversity in daily activities. Given the definition, it is appropriate to think of variety in relation to openness to change (stimulation) from the Schwartz (2012) basic value theory. Stimulation is described as the need for variety and stimulation in order to maintain an optimal and positive level of activation (Berlyne, 1960). The need for variety implies that the person's job satisfaction will increase as they experience an assortment of tasks, locations, and goals; however, it also infers that the complexity of work will increase due to a larger and more diverse set of tasks.

MISFIT – Deficiency. In the case of deficiency (R<N) within the variety dimension, one would expect that satisfaction should increase as rewards increase toward needs. The characteristics of variety indicate that the individual welcomes change and new problem sets in

their work environment. As the rewards of variety increase toward the needs of the officer, one would expect increased job satisfaction.

MISFIT – Excess. In the case of excess (R>N) within the variety dimension, it is appropriate to consider the effects from carryover, conservation, interference and depletion. Excess variety is most apparent in its relationship with the challenge content dimension. Increased variety implies more diversity and a larger number of responsibilities that could imply carryover into the challenge content dimension. Additionally, the increased amount of variety could provide exposure in the leadership opportunity dimension.

Carryover would occur if excess rewards in the variety dimension could assist in fulfilling needs in other dimensions. In the case of excess variety, one would expect exposure to other dimensions like challenge. Increased variety may result in a larger and more complex set of problems and accompanying tasks. In this content dimension, one would expect carryover effects from excess rewards. Excess rewards in variety could assist in fulfilling needs in challenge which could lead to an increase in job satisfaction.

Conservation would occur if excess rewards in the variety dimension are retained to satisfy future variety needs. Conservation of variety does not seem plausible. Variety at one point in time does not provide any input to create future variety. Excess rewards in variety do not facilitate an increase in future opportunities at variety so there is no expected effect on job satisfaction.

Interference would occur if excess rewards in the variety dimension inhibits need fulfillment in other dimensions. In the variety dimension, it is expected that excess rewards could affect leadership opportunity. The increased complexity of tasks and problems that may arise with excess rewards in variety could limit the resulting leadership opportunities. Excess

variety could interfere with needs fulfillment in the leadership opportunity content dimension which could then lead to a decrease in job satisfaction.

Depletion would occur if excess rewards in the variety dimension impede future variety needs. The depletion concept does not seem to apply to variety. An excess in variety does not restrict future variety and should not affect job satisfaction.

H6A (MISFIT): For variety, satisfaction will increase as rewards increase toward needs and will continue to increase as rewards exceed needs, decreasing only when excess rewards are large.

FIT. In the case of fit (R=N) within the variety dimension, one would expect that people who want and receive high levels of variety are likely to seek diversity. The high rewards from increased variety are sought by individuals who desire increased complexity. This relationship in itself can be rewarding for needs such as self-efficacy and self-actualization (Alderfer, 1972; Maslow, 1954; Rokeach, 1973). As applied to variety, it is expected that the desire for high rewards and high needs will result in more job satisfaction than low rewards and low needs.

H6B (FIT): For variety, satisfaction will be higher when rewards and needs are both high than when both are low.

Teammates. The seventh dimension is teammates, which is defined as a process where *the group of people in the work environment form cohesive bonds that exhibit mutual support and trust between individuals.* Teammates is indicative of the relationship with coworkers and other associates where the "work brings one into contact with fellow workers whom he [sic] likes" (Super, 1970, p. 10). Given the definition, it is appropriate to think of teammates in relation to conservation (tradition and security) from the Schwartz (2012) basic value theory. The combination of tradition and security as described in conservation is described as preserving

the existing social arrangements that provide certainty to life (Schwartz, 2012). Tradition is indicative of respect and commitment for group solidarity that is based in shared experience and fate. Security is indicative of stability among relationships and protection of members in the group. Cohen & Wills (1985) suggested that relationships directly enhance well-being and also provide a critical social support network. The need for teammates implies that the person's job satisfaction will increase as they form cohesive bonds that are mutually supportive; however, it also infers that privacy concerns may be an issue if the person requires solitude.

MISFIT – Deficiency. In the case of deficiency (R<N) within the teammates dimension, one would expect that satisfaction should increase as rewards increase toward needs. A deficiency in the teammates content dimension means that the individual is not being fulfilled with the required degree of cohesion within the team or unit level in their daily interactions. In this scenario, as the rewards of teammates increase toward the needs of the officer, one would expect increased job satisfaction.

MISFIT – Excess. In the case of excess (R>N) within the teammates dimension, it is appropriate to consider the effects from carryover, conservation, interference and depletion. Excess rewards in the teammates content dimension is most apparent in its relationship with the way of life content dimension. Increased cohesion at the unit or team level may carryover to benefit equilibrium in the individual's way of life requirements. Additionally, excess rewards in the teammates dimension can also provide for future benefits in the same dimension as the person's reputation may exceed the limits of their current unit and effect future team membership.

Carryover would occur if excess rewards in the teammates dimension could assist in fulfilling needs in other dimensions. In the case of excess rewards in the teammates dimension,

one would expect exposure to the way of life content dimension. Excess rewards from the relationships at work may provide social support that could improve balance in the connection between work and personal aspirations. In this content dimension, one would expect noticeable carryover effects from excess rewards. Excess rewards in the teammates content dimension can provide improved balance in the way of life content dimension which could lead to an increase in job satisfaction.

Conservation would occur if excess rewards in the teammates dimension could be retained to satisfy future need fulfillment in teammates. Conservation within the teammates content dimension seems plausible. An increase in quality relationships from membership in a current team could result in future quality relationships with existing and future teammates. Specifically within organizations with limited lateral entry, the reputation of an individual is built over time and can have future effects as an individual moves around different units. Contributions to the teammates dimension at one point in time can provide valuable information that may create future opportunities within the same dimension. Excess rewards in teammates may facilitate an increase in future opportunities in the same content dimension so there is an expected effect on job satisfaction.

Interference would occur if excess rewards in the teammates dimension prohibits need fulfillment in other dimensions. There are no apparent reasons why excess in the teammates dimension would limit need fulfillment in other dimensions. Excess rewards in the teammates dimension are not expected to interfere with need fulfillment in other content dimensions and should not affect job satisfaction.

Depletion would occur if excess rewards in the teammates dimension impede future teammates need fulfillment. The depletion concept does not seem to apply to teammates. An

excess in the teammates dimension does not restrict future teammate development and should not affect job satisfaction.

H7A (MISFIT): For teammates, satisfaction will increase as rewards increase toward needs and will continue to increase as rewards exceed needs.

FIT. In the case of fit (R=N) within the teammates dimension, one would expect that people who want and receive high levels of mutual support and trust are likely to seek cohesive bonds with coworkers. The high rewards from the teammates dimension are sought by individuals who value interpersonal relationships. As applied to the teammates dimension, it is expected that the desire for high rewards and high needs will result in more job satisfaction than low rewards and low needs.

H7B (FIT): For teammates, satisfaction will be higher when rewards and needs are both high than when both are low.

Challenge. The eight dimension is challenge, which is defined as *a demanding or stimulating work environment that requires an individual or team to test themselves.* Challenge is associated with stimulating "work which provides opportunity for independent thinking and for learning how and why things work" (Super, 1970, p. 9). Challenge is also extended to the team level and it does not exclude interpretations of physical challenges. Given the definition, it is appropriate to think of challenge in relation to openness to change (stimulation) from the Schwartz (2012) basic value theory. Stimulation is indicative of excitement, novelty, and challenge in life. The need for challenge implies that the person's job satisfaction will increase as they interact with demanding work that tests their limits; however, it also infers that failure may be more likely due to the adverse conditions.

MISFIT – Deficiency. In the case of deficiency R<N) within the challenge dimension, one would expect that satisfaction should increase as rewards increase toward needs. A deficiency in the challenge content dimension means that the individual is not being fulfilled with an appropriate degree of stimulation in their job. In this scenario, as the rewards of the challenge dimension increase toward the needs of the officer, one would expect increased job satisfaction.

MISFIT – Excess. In the case of excess (R>N) within the challenge dimension, it is appropriate to consider the effects from carryover, conservation, interference and depletion. Excess rewards in the challenge content dimension are expected to overlap with variety, teammates, and leadership opportunity. Increased levels in the challenge dimension may carryover to variety and teammates, while increased levels of challenge could also affect future leadership opportunities and balance in the way of life content dimension.

Carryover would occur if excess rewards in the challenge dimension could assist in fulfilling needs in other dimensions. In the case of excess challenge, one would expect exposure to other dimensions like variety and teammates. Increased challenge may result in more stimulating work that requires an individual or team to test their limitations. Excess rewards in challenge may also increase adversity and result in higher quality relationships within the teammates content dimension. In this content dimension, one would expect carryover effects from excess rewards. Excess rewards in challenge could assist in fulfilling needs in the variety and teammates dimension which could lead to an increase in job satisfaction.

Conservation would occur if excess rewards in the challenge dimension are retained to satisfy future need fulfillment in the challenge dimension. Conservation of challenge does not seem plausible. Challenge at one point in time does not provide inputs to create future challenge.

Excess rewards in challenge do not facilitate an increase in future opportunities at challenge so there is no expected effect on job satisfaction.

Interference would occur if excess rewards in the challenge dimension inhibits need fulfillment in other dimensions. In the challenge dimension, it is expected that excess rewards could affect leadership opportunity and way of life. The increased stimulation and harsh conditions that typify excess rewards in challenge could limit success and result in less leadership opportunity. Furthermore, excess rewards in the challenge dimension could disrupt balance in the way of life content dimension. Excess challenge could interfere with needs fulfillment in the leadership opportunity and the way of life content dimensions which could then lead to a decrease in job satisfaction.

Depletion would occur if excess rewards in the challenge dimension impede future need fulfillment in the challenge dimension. The depletion concept does not seem to apply to challenge. An excess in the challenge dimension does not restrict the future of the challenge dimension and should not affect job satisfaction.

H8A (MISFIT): For challenge, satisfaction will increase as rewards increase toward needs and will continue to increase as rewards exceed needs, decreasing only when excess rewards are substantial.

FIT. In the case of fit (R=N) within the challenge dimension, one would expect that people who want and receive high levels of challenge are likely to believe that they set high aspirations and achieved them. This relationship in itself can be rewarding for needs such as self-efficacy and self-actualization (Alderfer, 1972; Maslow, 1954; Rokeach, 1973). It is also common that high needs and rewards within one dimension are correlated with high needs and rewards in other dimensions (Harrison, 1978). The relationship between high needs and rewards

across multiple dimensions contributes to the fulfillment of needs for growth and self-actualization (Edward & Shipp, 2007). As applied to the challenge dimension, it is expected that the desire for high rewards and high needs will result in more job satisfaction than low rewards and low needs.

H8B (FIT): For challenge, satisfaction will be higher when rewards and needs are both high than when both are low.

Way of Life. The ninth dimension is way of life, which is defined as *the balance of work requirements, family obligations, and personal aspirations towards an acceptable equilibrium.* Way of life is associated with daily activities that "permit one to live the kind of life he [sic] chooses and to be the kind of person he [sic] wishes to be" (Super, 1970, p. 10). Way of life is focused on the individual's ability to manage responsibilities in facets of work, family, and personal objectives. Given the definition, it is appropriate to think of way of life in terms of conservation (security) and self-enhancement (hedonism) from the Schwartz (2012) basic values theory. Security is indicative of stability among relationships and protection of members in the group which could range from family members to work groups. Hedonism is indicative of pleasure, gratification, and enjoyment in life (Freud, 1933; Williams, 1968). Way of life is defined to imply balance across all dimensions of the person's life. The need for way of life implies that job satisfaction will increase as the person achieves an acceptable equilibrium across all facets of their life.

MISFIT – Deficiency. In the case of deficiency (R<N) within the way of life dimension, one would expect that satisfaction should increase as rewards increase toward needs. A deficiency in the way of life content dimension indicates that the person perceives an imbalance

in their responsibilities across all aspects of their life. In this scenario, as the rewards of way of life increase toward the needs of the officer, one would expect increased job satisfaction.

MISFIT – Excess. In the case of excess (R>N) within the way of life dimension, it is appropriate to consider the effects from carryover, conservation, interference and depletion. Excess rewards in the way of life content dimension are expected to overlap with the teammates content dimension. Increased levels in way of life may carryover to the interpersonal relationships that are maintained within the work-family balance, so that increased way of life could also benefit the teammates content dimension.

Carryover would occur if excess rewards in the way of life dimension could assist in fulfilling needs in other dimensions. In the case of excess way of life, one would expect exposure to the teammates content dimension. Increased way of life may take the form of increased benefits in the balance of personal aspirations with the team members in the work environment. In this content dimension, one would expect carryover effects from excess rewards. Excess rewards in way of life could assist in providing improved balance within the teammates content dimension which could then lead to an increase in job satisfaction.

Conservation would occur if excess rewards in the way of life dimension are retained to satisfy future need fulfillment in the way of life dimension. Conservation in the way of life dimension does not seem plausible. Way of life at one point in time does not provide inputs to create future way of life benefits. Excess rewards in the way of life dimension do not facilitate an increase in future opportunities in the same dimension so there is no expected effect on job satisfaction.

Interference would occur if excess rewards in the way of life dimension inhibits need fulfillment in other dimensions. There are no apparent reasons why excess in the way of life

dimension would limit need fulfillment in other dimensions. Excess rewards in the way of life dimension are not expected to interfere with need fulfillment in other content dimensions and should not affect job satisfaction.

Depletion would occur if excess rewards in the way of life dimension impede future need fulfillment in the way of life dimension. The depletion concept does not seem to apply to way of life. An excess in the way of life dimension does not restrict the future of the way of life dimension and should not affect job satisfaction.

H9A (MISFIT): For way of life, satisfaction will increase as rewards increase toward needs and will continue to increase as rewards exceed needs.

FIT. In the case of fit (R=N) within the way of life dimension, one would expect that people who want and receive high levels of work-family balance are likely to seek a sustainable equilibrium between their work requirements and their personal lives. The high rewards from the way of life dimension are sought by individuals who value balance between their work, family, and personal aspirations. As applied to the way of life dimension, it is expected that the desire for high rewards and high needs will result in more job satisfaction than low rewards and low needs.

H9B (FIT): For way of life, satisfaction will be higher when rewards and needs are both high than when both are low.

Inspirational Leadership. The tenth dimension is inspirational leadership, which is defined as *the degree to which senior decision makers foster a positive climate that is supportive and inspirational.* Inspirational leadership is associated with supervisory relations where work is "carried out under a supervisor who is fair and with whom one can get along" (Super, 1970, p. 10). This characterization is extended in inspirational leadership to include the degree of support

and inspiration that an individual perceives from their senior leaders. Given the definition, it is appropriate to think of inspirational leadership in relation to conservation (conformity and tradition) from the Schwartz (2012) basic value theory. The combination of conformity and tradition is described as the subordination of self in favor of socially imposed expectations (Schwartz, 2012). Conformity is indicative of self-discipline, obedience, loyalty, and responsibility. Tradition is indicative of respect, commitment, and group solidarity. The need for inspirational leadership implies that the person's job satisfaction will increase when they are a member of a team where the senior leaders are supportive and inspirational.

MISFIT – Deficiency. In the case of deficiency (R<N) within the inspirational leadership dimension, one would expect that satisfaction should increase as rewards increase toward needs. A deficiency in inspirational leadership indicates that the person perceives a lack of support and appropriate guidance from senior leaders within their organization. In this scenario, as the rewards of inspirational leadership increase toward the needs of the officer, one would expect increased job satisfaction.

MISFIT – Excess. In the case of excess (R>N) within the inspirational leadership dimension, it is appropriate to consider the effects from carryover, conservation, interference and depletion. Excess rewards in the inspirational leadership content dimension are expected to overlap with meaningful purpose. Increased levels of inspirational leadership may carryover into need fulfillment that reinforces commitment to the organizational goals and increased benefits in meaningful purpose.

Carryover would occur if excess rewards in the inspirational leadership dimension could assist in fulfilling needs in other dimensions. In the case of excess rewards in the inspirational leadership dimension, one would expect exposure to meaningful purpose. Excess rewards in the

inspirational leadership dimension may provide strong sense of purpose. In this content dimension, one would expect strong carryover effects from excess rewards. Excess rewards in inspirational leadership can assist in fulfilling needs in meaningful purpose which could lead to an increase in job satisfaction.

Conservation would occur if excess rewards in the inspirational leadership dimension could be retained to satisfy future need fulfillment in inspirational leadership. Conservation of inspirational leadership does not seem plausible. Contributions to the inspirational leadership dimension at one point in time do not provide input to create future opportunities within the same dimension. Excess rewards in inspirational leadership do not facilitate an increase in future opportunities in the same content dimension so there is no expected effect on job satisfaction.

Interference would occur if excess rewards in the inspirational leadership dimension prohibits need fulfillment in other dimensions. There are no apparent reasons why excess rewards in the inspirational leadership dimension would limit need fulfillment in other dimensions. Excess rewards in the inspirational leadership dimension are not expected to interfere with need fulfillment in other content dimensions and should not affect job satisfaction.

Depletion would occur if excess rewards in the inspirational leadership dimension impede future inspirational leadership need fulfillment. The depletion concept does not seem to apply to inspirational leadership. An excess in the inspirational leadership dimension does not restrict future inspirational leadership development and should not affect job satisfaction.

H10A (MISFIT): For inspirational leadership, satisfaction will increase as rewards increase toward needs and will continue to increase as rewards exceed needs.

FIT

In the case of fit (R=N) within the inspirational leadership dimension, one would expect that people who want and receive high levels of leadership are likely to seek a positive climate that is supportive and inspirational. The high rewards from the inspirational leadership dimension are sought by individuals who value the mentorship and guidance provided by senior decision makers. As applied to the inspirational leadership dimension, it is expected that the desire for high rewards and high needs will result in more job satisfaction than low rewards and low needs.

H10B (FIT): For inspirational leadership, satisfaction will be higher when rewards and needs are both high than when both are low.

Develop Hypotheses for Importance as a Moderator (H11)

The importance of content dimensions is a critical moderator when applying the results of N-R fit to outcomes of interest like job satisfaction. The resulting measure of N-R fit or N-R misfit in a content dimension may illustrate small, large, or no discrepancy. The degree of N-R fit or N-R misfit provides critical information about the relationship of perceived congruence between needs and rewards. However, the magnitude or intensity of that discrepancy is not captured in the N-R fit or N-R misfit measure. Given the amount of importance and the level of congruence in N-R fit or N-R misfit, it is possible to obtain a better understanding as applied to job satisfaction. Importance operates as a moderator between N-R fit or N-R misfit and job satisfaction, such that higher levels of importance in the content dimension will result in a stronger relationship between N-R fit and job satisfaction or N-R misfit and job satisfaction.

This hypothesis is stated in general terms, but applies to all 10 content dimensions and is tested for each content dimension.

H11A (MISFIT): As importance increases in the content dimension, the relationship between N-R misfit with job satisfaction will become stronger (i.e., the slope of the relationship between N-R misfit and job satisfaction will become steeper).

H11B (FIT): As importance increases in the content dimension, the relationship between N-R fit with job satisfaction will become stronger (i.e., the slope of the relationship between N-R fit and job satisfaction will become steeper).

Develop Hypotheses for Secondary Outcomes (H12-14)

Job satisfaction is the pleasurable emotional state resulting from the appraisal of one's job (Locke, 1969). Job satisfaction is a function of a perceived relationship that exists between what a person wants from their job and what they receive from their job (Locke, 1969). The underlying theme is that people garner more positive attitudes (like job satisfaction) when their needs are fulfilled. Organizational identification is the perception of oneness with an organization, where the individual identifies themselves with the success and failure of their team or unit (Ashforth & Mael, 1992). The conceptualization of organizational identification used in this study more explicitly translates into day-to-day activities that are comparable to job satisfaction. The strength of the relationship between lower order measures of organizational identification should maintain a strong relationship with job satisfaction. The expectation is that organizational identification at the unit level will have a strong positive relationship with job satisfaction, so that increases in job satisfaction will result in increased organizational identification.

H12: There will be a positive relationship between job satisfaction and organizational identification, so that increased job satisfaction will result in increased organizational identification.

Job satisfaction has been defined as the pleasurable emotional state resulting from the appraisal of one's job (Locke, 1969). Job satisfaction is a function of a perceived relationship that exists between what a person wants from their job and what they receive from their job (Locke, 1969). The underlying theme is that people garner more positive attitudes (like job satisfaction) when their needs are fulfilled. Organizational citizenship behaviors, or extra-role behaviors like helping and voice, have been described as beneficial behaviors that cannot be enforced on the basis of formal role obligations (Bateman & Organ, 1983). Helping is defined as cooperative behavior that is noncontroversial (Van Dyne & LePine, 1998). Helping falls in the affiliative-promotive category of organizational citizenship behavior and it emphasizes interpersonal harmony focused on building and preserving relationships. Voice is defined as behavior that emphasizes constructive challenge intended to improve rather than criticize (Van Dyne & LePine, 1998). Voice falls in the challenging-promotive category of organizational citizenship behavior and it emphasizes new ideas that seek improvement to existing policies and standard procedures. In the current conceptualization, the expectation is that both extra-role constructs (helping and voice), assessed at the unit or team level, will have a strong positive relationship with job satisfaction, so that increases in job satisfaction will result in increased helping and increased voice interactions.

H13A: There will be a positive relationship between job satisfaction and helping, so that increased job satisfaction will result in increased helping.

H13B: There will be a positive relationship between job satisfaction and voice, so that increased job satisfaction will result in increased voice.

In-role performance is defined as required or expected behavior which is the basis for ongoing job performance (Van Dyne & LePine, 1998). In-role activities can be considered part of a formal job description that outlines tasks as dictated by higher management. In-role behaviors are conceptually distinct from extra-role behaviors since the latter are defined with a lack of enforcement. Simply put, in-role behaviors are enforced and frequently measured to gauge job performance while extra-role behaviors are all those activities which are not outlined in the processes which define an organization's standard procedures. The application of the in-role construct in the proposed framework is congruent with the lowest level of analysis at the team or unit level. Therefore, the interpretation of the in-role construct implies in-role performance that refers to the person's job responsibilities. In the current conceptualization, the expectation is that the in-role construct at the job level will have a strong positive relationship with job satisfaction, so that increases in job satisfaction will result in increased in-role performance reporting.

H13C: There will be a positive relationship between job satisfaction and in-role performance, so that increased job satisfaction will result in increased in-role performance.

Organizational identification is the perception of oneness with an organization, where the individual identifies themselves with the success and failure of their team or unit (Ashforth & Mael, 1992). Organizational citizenship behaviors, or extra-role behaviors like helping and voice, have been described as beneficial behaviors that cannot be enforced on the basis of formal

role obligations (Bateman & Organ, 1983). The proposed framework suggests that organizational identification will be related to extra-role behaviors (helping and voice).

H14A: There will be a positive relationship between organizational identification and helping, such that increased organizational identification will result in increased helping.

H14B: There will be a positive relationship between organizational identification and voice, such that increased organizational identification will result in increased voice.

In-role performance is defined as required or expected behavior which is the basis for ongoing job performance (Van Dyne & LePine, 1998). The proposed framework suggests that organizational identification will be related to in-role performance.

H14C: There will be a positive relationship between organizational identification and in-role performance, such that increased organizational identification will result in increased in-role performance.

The research will now enter into a description of the processes used to build the Officer Needs-Rewards Survey. Two sets of data were collected in the application of the survey. One data set to conduct a pretest of the survey and the second data set to test hypotheses within a sample of Army officers.

CHAPTER 4: STUDY 1, DEVELOPING THE OFFICER NEEDS-REWARDS SURVEY

Introduction

This study began with a systematic process designed to develop a measurement instrument that could assist in answering the proposed research questions. The first requirement was to identify and define the content dimensions that describe the needs or desires that are relevant to the officer corps. With the content dimensions identified, the next step was to compile a set of items that appropriately correspond to the constructs to be measured. The initial items and their associated content dimensions comprised the initial survey that was administered in a pretest with the United States Military Academy (USMA) Class of 2017.

Sample

The pretest was conducted during the fall of 2015 with the current junior class at USMA. USMA is one possible commissioning source in the Army. Each year, West Point graduates about 20% of the newly commissioned officers into the Army. The other commissioning sources are the Reserve Officer Training Corps (ROTC) and the Officer Candidate School (OCS). During the fall of their junior year, West Point cadets enter a critical decision timeframe when they choose their initial branches. The initial branch serves as the launching point for the new officers, and making the right branch choice is critically important to their subsequent career paths. Upon graduation, each of these officers incur an Active Duty Service Obligation (ADSO) that ranges from five to seven years. A large majority of these officers spend three years at their first duty station and then conduct a permanent change of station to begin their first iteration of the professional military education (PME) sequence at the Captain's Career Course (CCC).

The current junior class at West Point is comprised of 1,022 cadets. The response rate for the survey was 92%, resulting in 940 respondents. This high response rate was due to the fact that the survey was part of the cadet's branching process. To enhance the quality of the data used in my analysis, I applied a number of screening mechanisms. For each respondent, I summed the number of responses for each of the seven options in the response scale. This technique made it apparent if a respondent chose to select a single option (for example, option 4 - middle of the scale) for all 175 questions. This pattern was taken as evidence of careless responding, based on the assumption that any respondent who provided conscientious input would not have a large proportion of responses in only one of the seven categories. With the sum of each option available for every respondent, I culled the information using the number of options chosen and the max frequency in any single option of the seven possibilities. In the first filter, I used the restriction that all respondents would have answers within four of the seven options and the max number of responses in any one option would not be greater than 150 or approximately 85% of the total number of items. The result of the first filter resulted in a sample size of 883. In the second filter, I used the restriction that all respondents would have answers within four of the seven options and the max number of responses in any one option would not be greater than 100 or approximately 57% of the total number of items. The result of the second filter resulted in a sample size of 788. I conducted analysis in the full data set (n=940), the first filter (n=883), and the second filter (n=788). In a review of the results from each of the three analyses, I chose to conduct my revision of the survey using the most restrictive filter (n=788).

Measures

The initial survey was comprised of three parts: Importance, Needs-Rewards, and Outcomes. Part I focuses on the Importance of the job characteristic. The content dimensions were assessed on a 7-point scale that ranged from *Not Important at All* to *Extremely Important*. The specific question, as applied to the 50 items (job characteristics), was: *When you evaluate an ideal job, how important are the following aspects of the job in your job choice decision?*

Part II determined how much of the job characteristic is present in the respondent's current position and how much of the content dimension is "right" for them personally. These responses were assessed on a 7-point scale that ranged from *None at All* to *A Very Great Amount*. The two specific questions, as applied to the 100 items (job characteristics), were: *How much of this characteristic is present in your position? How much of this characteristic do you personally feel is right for you?* The first question provides a measure of rewards and the second question provides a measure of needs.

The data from Part I provided information on the importance of each job characteristic, while data from Part II provided information on the rewards of the position and the needs of the respondent. Part III of the survey asks respondents to rate statements in terms of their agreement or disagreement as it relates to their current position and their current organization. These ratings provided information on specific outcomes of interest. The cadet pretest is designed to measure satisfaction, organizational identification, in-role activities and two components of organizational citizenship behavior (helping and voice). The lack of actual experience in the Army limits the outcome measures that are applicable to the cadet population. However, the aforementioned outcomes will allow for an initial preview of linkages between importance,

needs, rewards, and associated outcomes. The outcomes of interest for the follow on administrations are more applicable because the populations will have Army (or job) experience.

The content dimensions or job characteristics resulted from three pilot surveys that provided a sample size of 105 officers. The three pilot surveys were administered to two USMA Association of Graduate Societies in North Carolina, a select group of Army officers from the US Army Special Operations Command (USASOC), and a group of officers from the USMA Class of 1995. The content dimensions were compiled from a qualitative analyses of open-ended questions regarding job fulfillment in Army. The goal of the pilot surveys was to provide each respondent with the chance to personally explain the job characteristics from previous Army positions that provided the greatest satisfaction or rewards. The pilot survey is provided in Appendix A. The pilot survey gathered the respondents' status with the Army, and the follow on questions asked respondents to describe the job characteristics that provided the greatest fulfillment. The open-ended method did not limit the responses, and the exchange provided these proven volunteers to provide feedback on their Army experience and, if applicable, their civilian employment experiences. The results from the survey were consolidated and evaluated to identify a core set of content dimensions.

The initial analysis of data from the pilot surveys resulted in 25 job characteristics that were common across the range of respondents. See Appendix B for the complete list of initial job characteristics. To provide structure to these characteristics, I drew from several sources. One source was the work values occupational categories published on the Occupational Information Network (O*NET) (www.onetonline.org/find/descriptor/browse/Work_Values). This source lists six work values that are important to a person's satisfaction: Achievement, Independence, Recognition, Relationships, Support, and Working Conditions. Another source

was Super's (1970) Work Value Inventory (WVI) which identifies 15 value dimensions. The 25 job characteristics were consolidated into 11 proposed content dimensions that were aligned with the WVI naming convention and categorized into the O*NET work values. See Appendix C for the methodology and consolidation of the proposed content dimensions. The goal in the consolidation methodology was to use as much of the actual language from respondents to describe the job characteristics that provided the greatest fulfillment.

The 11 proposed content dimensions were subsequently defined and renamed to match the culture and professional language appropriate for the Army. See Appendix D for the definitions of each content dimension. The renaming of the proposed content dimensions resulted in the following 11 titles: Leadership Opportunity, Autonomy, Meaningful Purpose, Developmental Potential, Compensation/Benefits, Variety, Teammates, Challenge, Way of Life, Senior Leadership, and Performance Orientation. Upon further review, Performance Orientation was consolidated in the Development Potential content dimension because of its similarity in "upward mobility" that is inherent to both of the proposed definitions. The concern was to make sure that the content dimensions were distinct and did not induce any undue psychometric cross-loading between these two similar ideas. In the final consolidation, I moved forward with 10 content dimensions.

The next step in the survey building process was to create a pool of items that could appropriately identify each of the 10 distinct content dimensions. In the initial selection of the items, the goal was to assign five items per content dimension so that I could choose the highest performing items from the pretest. The minimum requirement for identification is three items per content dimension. The initial 50 items (5 items for each content dimension) were compiled using various work values surveys, including the Work Values Inventory (WVI; Super, 1970),

the Work Aspect Preference Scale (WAPS; Pryor, 1983), the Minnesota Importance Questionnaire (MIQ; Gay et al., 1971), and the Work Values Survey (WVS; Cable & Edwards, 2004). Each of these work value surveys have proven to be credible measurement instruments so their products provided the correct foundation. A large majority of the items were adjusted to ensure their relevance within the Army culture. See Appendix E for the initial pool of items.

Analyses

Expert Judge Review of Content Dimensions and Items. After assigning items to the content dimensions, the initial survey was ready to be examined by a group of expert judges. The wealth of experience in survey development among members of the Organizational Behavior area at Kenan-Flagler provided the panel of expert judges at my disposal. In order to evaluate the newly created instrument, I initiated an online survey that asked judges to rate each of the 50 items against each of the 10 content dimensions. The expert panel used a rating system to judge the extent that each item corresponded with the definition of each content dimension. The ratings were compared on a 9-point scale that ranged from *Not at All* to *Extremely Well*.

In order to get an idea about the possible cross-loading of items to other content dimensions, it was suggested to conduct a simple math transformation to change the data into a precursor of information that is available within the more robust confirmatory factor analysis. By simply subtracting one from the mean of each rating and then dividing by eight [(Mean-1)/8], it was easy to examine the results within a range between zero and one (the division by eight is because there are nine possible answers on the response scale).

Confirmatory Factor Analysis. The following review will provide an overview of the analysis of reliability, construct validity, and metrics used in the confirmatory factor analysis. This analysis is focused on the evaluation of the measurement model underlying the survey and

the linkages established within Part I and Part II of the survey. The lack of operational experience from the cadet population made the information from Part III less credible for revisions.

In order to prove the ability of the survey to consistently measure the content dimensions, it is important to evaluate whether the results from the instrument are reliable. Reliability is focused on the degree to which a measure is free from error. Measurement error has been categorized in two forms: systematic error (occurs with repeated measures) and unsystematic error (random). Systematic errors can arise from methodological factors such as self-reporting which embody individual differences that result in similar traits or methods of gathering responses. Unsystematic error is random and varies across respondents and specific administrations of a measure. The proportion of true score variance is represented by the Omega Coefficient. The criterion used in the measurement of reliability was .70 as described by Nunnally (1978). The administration of the Needs-Rewards Survey attempted to resolve some common suspects of systematic error like social desirability and negative affectivity. The introduction of the survey provided a clear vision for the use of the data and it also assured respondents that there were no "right" or "wrong" answers to the questions. Furthermore, the respondents were informed that their responses would not impact their standing within the branching process and would be kept in strict confidentiality.

An equally important concept requiring evaluation in this descriptive analysis is construct validity. Construct validity refers to the ability of a specific measure to actually represent a construct of interest. It is possible that a measure can result in high reliability (minimum error), but remain invalid by not successfully representing the intended construct. On the other hand, a measure cannot be valid without being reliable. For a measure to be valid, it must be reliable.

Therefore, it is often said that reliability is a necessary, but not sufficient condition for validity. In order to achieve construct validity, I will describe the attributes of the construct at the conceptual level and further distinguish the construct from others within the survey in the upcoming review.

The confirmatory factor analysis explains the degree of fit with the particular factor structure that was built in its design. The confirmatory factor analysis examines the resulting measurement model and evaluates the degree of success in which it links the 10 latent variables or content dimensions to their associated items. The variances of the factors in this analysis are fixed to unity (one), so the factors are standardized and the item loadings are freely estimated. This analysis used LISREL (8.8) software and the maximum likelihood method for estimation of parameters. The model estimation uses the maximum likelihood procedure which is an iterative process where the starting value of parameter estimates are successively changed until the produced estimates are close to the sample variances and covariances that are specified by the model. In order to determine model fit, three fit indices were evaluated. The reported chi-square from the minimum fit function (MFF) tests the deviation between the original and the reproduced covariance matrices. Larger chi-square values indicate greater deviations which would ideally result in non-significant results that would indicate adequate model fit. A good model of fit would provide an insignificant result at the $p<.05$ level. Overall model fit was evaluated by examining the root mean squared error of approximation (RMSEA; Hu & Bentler, 1999) and the comparative fit index (CFI; Hu & Bentler, 1999). The RMSEA estimates the discrepancy between the original and reproduced covariance matrices in the population. The CFI estimates the relative improvement in fit of the target model as compared to a null model in which all observed variables are uncorrelated (Bentler, 1990). The CFI estimate is independent of sample

size and has an expected value of 1.00 when the target model matches the null model (Gerbing & Anderson, 1993). The acceptable cut-offs for measures of fit have been debated within the literature, but this analysis uses the Hu and Bentler (1999) criteria. The criterion for RMSEA is .06 for close fit, and the criterion for CFI is .95 for adequate fit (Hu & Bentler, 1999).

The assessment of model adequacy used standardized item loadings, standardized residuals, standardized modification indices, and completely standardized expected changes to determine primary loadings and cross-loadings. The revisions of the initial survey used calculations of the absolute maximum of cross-loadings and the absolute average of cross-loadings to evaluate item performance within each content dimension. The factor loadings in the model should be statistically significant and in the expected direction. These two conditions illustrate convergence of items on the intended factor. The second criterion in assessing the adequacy of the measurement model is a check on the estimated variances of the measurement errors. Each of these estimates should be greater than zero and less than the variance of the corresponding item. The last criterion in assessing adequacy of the measurement model is a check on the factor correlations. The content dimensions (or factors) should be empirically distinct from one another. Therefore, any factor correlations that are not significantly less than unity are a source of concern (Bagozzi & Phillips, 1982). In the present study, this criterion need not be very stringent due to the large sample size. Thus, for substantive reasons, a criterion of .85 was used as a minimum standard for discriminant validity.

Results, Initial Officer Needs-Rewards Survey (5-Items per Dimension)

Results from Expert Judge Ratings. The best performing items indicated by the expert judges review were found in the autonomy (M=8.71, Sdev=0.67), meaningful purpose (M=8.69, Sdev=0.69), and compensation/benefits (M=8.69, Sdev=0.68) content dimensions. The worst

performing items were found in the senior leadership (M=7.11, Sdev=1.95), developmental potential (M=7.49, Sdev=2.03), and way of life (M=7.60, Sdev=1.17) content dimensions. See Appendix F for the Expert Judges, Item Rating Survey. See Table 1 for a full reporting of the descriptive statistics from the expert review.

The review of items and content dimension by expert judges indicated confusion between developmental potential and senior leadership, as well as senior leadership and leadership opportunity. This pattern prompted a renaming of developmental potential to recognition of potential and a renaming of senior leadership to inspirational leadership. See Appendix F for the results of the re-naming. Along with the renaming, there were many revisions that resulted from the work conducted with the 12 expert judges. See Table 2 for the results of the simple math transformation that assisted in revisions for the renaming of content dimensions and revisions of item wording.

The final 10 content dimensions resulting from the review by expert judges are listed below:

1. Leadership Opportunity – The chance to be in charge and direct the actions of a group organized to accomplish a common goal.

2. Autonomy – The ability to determine how to accomplish a goal without external control or influence.

3. Meaningful Purpose – The application of personal effort towards a significant cause that contributes to the greater good for those you represent.

4. Recognition of Potential – The recognition and rewards that come from successful contributions are acknowledged with increasing levels of responsibility and authority.

5. Compensation/Benefits – The financial compensation package that is offered to employees in return for their production within an organization.

6. Variety – A work environment that provides an assortment of tasks, locations, and goals that result in diversity.

7. Teammates – The group of people in the work environment form cohesive bonds that exhibit mutual support and trust between individuals.

8. Challenge – A demanding or stimulating work environment that requires an individual or team to test themselves.

9. Way of Life – The result of balancing work requirements, family obligations, and personal aspirations towards an acceptable equilibrium.

10. Inspirational Leadership – The degree to which senior decision makers foster a positive climate that is supportive and inspirational.

The resulting instrument – the initial Officer Needs-Rewards Survey – was used in the cadet pretest. See Appendix H for the initial survey used in the cadet pretest. See Appendix G for the content dimensions listed with their associated items.

Confirmatory Factor Analysis. The review of the descriptive statistics and confirmatory factor analysis will be presented in parallel with the Officer Needs-Rewards Survey format: importance, rewards, and needs. The data from importance, rewards, and needs represent three distinct 10-factor models. The 10 factors within each of the three areas are composed by the associated content dimensions. The following results are provided from the review of the initial 5-item survey. From the raw data, the highest means reported in reference to importance were found in the meaningful purpose (M=6.02, Sdev=0.95), teammates (M=6.01, Sdev=0.91), and inspirational leadership (M=5.97, Sdev=0.93) content dimensions. The lowest means reported in

reference to importance was found in the compensation/benefits (M=4.28, Sdev=1.36), recognition of potential (M=4.40, Sdev=1.14), and variety (M=4.93, Sdev=1.10) content dimensions. The highest means reported in reference to rewards was found in the teammates (M=4.98, Sdev=1.27), challenge (M=4.43, Sdev=1.33), and inspirational leadership (M=4.46, Sdev=1.28) content dimensions. The lowest means reported in reference to rewards was found in the compensation/benefits (M=3.16, Sdev=1.28), recognition of potential (M=3.77, Sdev=1.14), and variety (M=3.95, Sdev=1.24) content dimensions. The highest means reported in reference to needs was found in the teammates (M=5.85, Sdev=0.95), meaningful purpose (M=5.77, Sdev=1.03), and inspirational leadership (M=5.66, Sdev=0.98) content dimensions. The lowest means in reported in reference to needs was found in the compensation/benefits (M=4.22, Sdev=1.34), recognition of potential (M=4.47, Sdev=1.09), and variety (M=4.87, Sdev=0.98) content dimensions. Teammates and inspirational leadership are in the top three of all portions of the survey: importance, rewards and needs. Compensation/benefits, recognition of potential, and variety are the three lowest in all three portions of the survey: importance, rewards, and needs. Interestingly, meaningful purpose is in the top three concerning importance and needs, and is only replaced by challenge in the rewards section.

The reliability of the content dimensions from the cadet pretest were all greater than the minimum threshold of .70 suggested by Nunnally (1978). The lowest reliability is reported in the recognition of potential (Omega= .784) content dimension as it refers to importance. The highest reliability is reported in the challenge (Omega= .927) content dimension as it refers to rewards. The average reliability for the 10 content dimensions for importance (Avg Omega= .870) is the lowest, and the average reliability for the 10 content dimensions for rewards (Avg Omega= .887) is the highest, with needs falling close behind (Avg Omega= .885). Overall, the reliabilities of

the Officer Needs-Rewards Survey were promising. See Tables 3, 4, and 5 for a complete review of reliability measures by rewards, needs, and importance for the 5-Item cadet pretest.

In general, the measurement instrument performed quite well. There is only one case where a primary loading was smaller than an expected cross-loading in another factor. The one item applied to importance in the recognition of potential content dimension. Otherwise, a general review of the results from the confirmatory factor analysis is favorable for informing the revision of the initial survey.

All items within the survey are statistically significant. All parameter estimates in the output are in the expected direction and seem to illustrate a coherent and justifiable pattern. All of the estimated variances of the measurement errors are greater than zero. However, there are 10 items within importance, six items within rewards, and six items within needs that maintain error variances greater than the corresponding explained variance. Across the three areas (importance, rewards, and needs), four items account for 12 of the cases where this is true (AUT1, ROP1, VAR1, and TEM1). The other cases are randomly apparent across the results. As this was the initial administration of the measurement instrument, we expected some re-wording and culling to improve individual items and overall performance. In total, for the 5-item used in the pretest, three factor correlations were greater than .85: Recognition of Potential (importance) & Recognition of Potential (rewards) reported at .91, Variety (needs) & Challenge (needs) reported at .86, and Variety (needs) & Challenge (needs) reported at .85. The discriminant validity of these factors will require further review during the revision.

Results by Content Dimension

The following section will review each content dimension and the associated items in greater detail. The goal is to highlight the revisions that were made in the creation of the Officer Needs-Rewards Survey. The initial survey was administered with 5-items for each content dimension. The following explanation will provide justification for removing the lowest performing items and streamlining the survey down to 3-items per content dimension. See Table 6 for a complete review of item filtering (5-Item to 4-Item, 4-Item to 3-Item) for the cadet pretest. See Table 7 for a complete listing of items and their associated content dimensions in the revision of the survey (5-Item to 4-Item, 4-Item to 3-Item).

Leadership Opportunity (1 of 10): This content dimension is defined as *the chance to be in charge and direct the actions of a group organized to accomplish a common goal.* The factor consists of five items, which appear as items 10, 13, 25, 35, and 48 in the actual survey.

10. Using your leadership abilities.

13. Being in charge of a team.

25. Having your unit look to you for direction.

35. Being responsible for the efforts of others.

48. Leading the way for your team.

The five items designated to identify the leadership opportunity content dimension are generally effective in the 5-Item model. The average reliability for leadership opportunity (Omega = .887) from across the three areas (importance, rewards, needs) is well above the minimum (.70). The average primary loading in this content dimension is .782 and the absolute average of the cross-loadings is .085 with an average absolute maximum value of .180. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within

leadership opportunity, it was decided to drop item 13 (LOP2 – *Being in charge of a team.*) Item 13 shared the largest absolute average cross-loading (.223) in a negative fashion with the teammates and inspirational leadership content dimensions. The item may have induced some form of abrasive leadership style in the perception of respondents.

In the resulting 4-Item solution for the leadership opportunity content dimension, we see the average reliability move slightly down (.853) from the previous solution. The average primary loading decreased slightly (.769) and the absolute average of the cross-loadings moves down (.081) with a higher average absolute maximum value of .216. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within the new 4-Item solution for leadership opportunity, it was decided to drop item 35 (LOP4 – *Being responsible for the efforts of others.*). Item 35 reported the lowest average primary loading in the 4-Item solution (.728) while also maintaining the second highest absolute average cross-loading (.228) with negative influence in the area of Importance as it related to teammates and inspirational leadership. Again, the interpretation can be attributed to the possible perception of an overbearing leadership style.

The remaining 3-Item solution for the leadership opportunity content dimension reports an average reliability (.828) that is lower than the previous iterations. However, the average primary loading has risen slightly (.784) while producing some stability in the absolute average of cross-loadings (.086) and a slight increase in the average absolute maximum cross-loadings (.243). The area of importance, as it relates to leadership opportunity, carries the most significant amount of cross-loading influence. Items 13 and 35 (both dropped) share a common theme that our officers perceive leadership opportunities as a responsibility, rather than a goal in itself. If you only want to be a leader, then you may not make the best teammate. This theme is

continued in the results found within the rewards area where the primary loadings for each of the three remaining items are the highest across the whole content dimension. Two of the three items that were retained, item 10 (LOP1 – *Using your leadership abilities.*) and item 25 (LOP3 – *Having your unit look to you for direction.*), have significant crossing loadings with relatively higher magnitudes in autonomy (importance and needs). Overall, the remaining 3-Item solution does an acceptable job in maintaining construct validity while also conserving acceptable reliability.

Autonomy (2 of 10): This content dimension is defined as *the ability to determine how to accomplish a goal without external control or influence.* The factor consists of five items, which appear as items 2, 15, 23, 34, and 41 in the actual survey.

2. Working in ways you personally think are best.

15. Making your own decisions.

23. Doing your work in your own way.

34. Determining the way you get your tasks done.

41. Being able to decide how to get your job done.

The five items designated to identify the autonomy content dimension are effective in the 5-Item model. The average reliability for autonomy (Omega = .895) from across the three areas (importance, rewards, needs) is well above the minimum (.70). The average primary loading in this content dimension is .791 and the absolute average of the cross-loadings is .052 with an average absolute maximum value of .101. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within autonomy, it was decided to drop item 2 (AUT1 – *Working in ways you personally think are best.*) Item 2 has the lowest average primary loading (.635) which has resulted in large error variance across all three areas (importance, rewards, and needs).

In the resulting 4-Item solution for the autonomy content dimension, we see the average reliability rise slightly higher (.889) from the previous solution. The average primary loading moves higher (.817) and the absolute average of the cross-loadings moves slightly higher (.058) with a higher average absolute maximum value of .161. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within the new 4-Item solution for autonomy, it was decided to drop item 15 (AUT2 – *Making your own decisions.*). In the 4-Item solution, Item 15 reported the lowest average primary loading (.749) with significant cross-loadings of marginal magnitude in the way of life content dimension for both importance and needs. The respondents may have perceived the question with an application that was not solely focused on the work environment, but included overall decisions about their time and resources.

The remaining 3-Item solution for the autonomy content dimension reports an average reliability (.879) that is lower than the previous iterations. However, the average primary loading has risen substantially (.841) while maintaining some stability in the absolute average of cross-loadings (.056) and a slight increase in the average absolute maximum cross-loadings (.168). The area of importance, as it relates to autonomy, carries the most significant amount of cross-loading influence. Two of the three items that were retained, item 23 (AUT3 – *Doing your work in your own way.*) and question 34 (AUT4 – *Determining the way you get your tasks done.*), have significant crossing loadings with relatively higher magnitudes in leadership opportunity and challenge (importance and needs). Overall, the remaining 3-Item solution does a good job in maintaining construct validity while also reporting a reliability value that is ranked in the top three of the established content dimensions.

Meaningful Purpose (3 of 10): This content dimension is defined as *the application of personal effort towards a significant cause that contributes to the greater good for those you represent.* The factor consists of five items, which appear as items 9, 18, 22, 31, and 43 in the actual survey.

9. Doing good for other people.

18. Giving help to those in need.

22. Making important contributions on behalf of your community.

31. Being of service to society.

43. Protecting the well-being of others.

The five items designated to identify the meaningful purpose content dimension are effective in the 5-Item model. The average reliability for meaningful purpose (Omega = .903) from across the three areas (importance, rewards, needs) is well above the minimum (.70). The average primary loading in this content dimension is .807 and the absolute average of the cross-loadings is .065 with an average absolute maximum value of .169. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within meaningful purpose, it was decided to drop item 22 (MPU3 – *Making important contributions on behalf of your community*.) Item 22 has the lowest average primary loading (.780) and the second highest absolute average cross-loading within this content dimension.

In the resulting 4-Item solution for the meaningful purpose content dimension, we see the average reliability move slightly down (.877) from the previous solution. The average primary loading also moves slightly lower (.801) and the absolute average of the cross-loadings moves slightly higher (.068) with a higher average absolute maximum value of .194. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within the new 4-Item solution for meaningful purpose, it was decided to drop item 43 (MPU5 – *Protecting the well-*

being of others.). Item 43 reported the lowest average primary loading in the 4-Item solution (.785) while also producing the highest absolute average cross-loading (.337) with significant cross-loadings of relatively substantial magnitudes in leadership opportunity across all three areas (importance, rewards, needs) and in teammates across two of the three areas (importance and needs). Item 20 is the only instance in the whole survey where a cross-loading (leadership opportunity within importance, .506) exceeded the intended primary loading (recognition of potential within importance, .493). The respondents' interpretation focused on the word *others* as part of their team or organization, rather than focusing on the effects provided by the team or organization.

The remaining 3-Item solution for the meaningful purpose content dimension reports an average reliability (.857) that is lower than the previous iterations. However, the average primary loading has risen slightly (.817) while also producing a decrease in the absolute average of cross-loadings (.055) and a decrease in the average absolute maximum (.146). Within the meaningful purpose content dimension, it is the needs area that carries the most significant amount of cross-loading influence. The common theme for the three items (9, 18, and 31) that were retained for this content dimension is that they all delineate that the meaningful purpose in which they contribute is external to their team or organization. Overall, the remaining 3-Item solution does a fair job in maintaining construct validity while also reporting an acceptable reliability value.

Recognition of Potential (4 of 10): This content dimension is defined as *the recognition and rewards that come from successful contributions are acknowledged with increasing levels of responsibility and authority.* The factor consists of five items, which appear as items 4, 20, 24, 40, and 47 in the actual survey.

4. Knowing your organization considers your work valuable.

20. Knowing that good work will be rewarded with increasing responsibility.

24. Getting recognition when you do a good job.

40. Being acknowledged when you do your job well.

47. Receiving opportunities based on your performance.

The five items designated to identify the recognition of potential content dimension are marginally effective in the 5-Item model. The average reliability for recognition of potential (Omega = .833) from across the three areas (importance, rewards, needs) is above the minimum (.70). The average primary loading in this content dimension is .703 and the absolute average of the cross-loadings is .211 with an average absolute maximum value of .325. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within recognition of potential, it was decided to drop item 4 (ROP1 – *Knowing your organization considers your work valuable.*) Item 4 has the lowest average primary loading (.601) among the five items in this content dimension and the second lowest overall. The item maintains significant cross-loadings with each content dimension in the area of importance, minus compensation/benefits. The largest cross-loading within importance is (.300) is shared with Leadership Opportunity.

In the resulting 4-Item solution for the recognition of potential content dimension, we see the average reliability decrease slightly (.814) from the previous solution. The average primary loading moves higher (.720) and the absolute average of the cross-loadings decreases slightly (.194) with a higher average absolute maximum value of .383. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within the new 4-Item solution for recognition of potential, it was decided to drop item 47 (ROP5 – *Receiving opportunities based on your performance.*). This decision was probably the most difficult in the overall analysis. In the 4-Item solution, item 47 and item 20 (ROP2 – *Knowing that good work will be rewarded*

with increasing responsibility.) both reported low average primary loadings (.594 and .595, respectively) with high absolute average cross-loadings (.273 and .264) and high absolute average maximums (.449 and .487). With two poor options for the required third item, I chose to reword item 20 and drop item 47. The cross-loadings in item 20 were consistently higher in the leadership opportunity content dimension. This result influenced my decision to remove *with increasing responsibility* from the second half of item 20. The new version of item 20 is *Knowing that good work will be rewarded*. Removal of the perceived leadership language is expected to improve performance. Unfortunately, the result will not be known until the current administration of the Officer Needs-Rewards Survey is complete.

The remaining 3-Item solution for the recognition of potential content dimension reports an average reliability (.816) that is lower than the original solution, and the second lowest among all factors. The average primary loading has risen slightly (.761) and the absolute average of cross-loadings (.152) as well as the average absolute maximum cross-loadings (.307) has decreased slightly. The rewards area, as it relates to leadership opportunity and meaningful purpose, carries the most significant amount of cross-loading influence. The values reported in the 3-Item solution here do not account for the rewording from above. Overall, the remaining 3-Item solution does a marginal job in maintaining construct validity while also reporting an acceptable reliability value. With the removal of *leadership responsibilities* in item 20, it is expected that performance will improve.

Compensation/Benefits (5 of 10): This content dimension is defined as *the financial compensation package that is offered to employees in return for their production within an organization.* The factor consists of five items, which appear as items 8, 14, 29, 39, and 45 in the actual survey.

8. Strong compensation package.

14. Enough pay to be comfortable.

29. Receiving sufficient money to live well.

39. Total benefits earned are fair.

45. The opportunity to become financially wealthy.

The five items designated to identify the compensation/benefits content dimension are effective in the 5-Item model. The average reliability for compensation/benefits (Omega = .889) from across the three areas (importance, rewards, needs) is well above the minimum (.70). The average primary loading in this content dimension is .782 and the absolute average of the cross-loadings is .079 with an average absolute maximum value of .139. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within compensation/benefits, it was decided to drop item 8 (COM1 – *Strong compensation package*.) Item 8 has the lowest average primary loading (.691) and the lowest primary loading within each of the three areas (importance, rewards, needs).

In the resulting 4-Item solution for the compensation/benefits content dimension, we see the average reliability move slightly down (.876) from the previous solution. The average primary loading also moves slightly higher (.796) and the absolute average of the cross-loadings moves slightly lower (.077) with a higher average absolute maximum value of .172. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within the new 4-Item solution for compensation/benefits, it was decided to drop item 39 (COM4 – *Total benefits earned are fair.*). Item 39 reported the second lowest average primary loading in the 4-Item solution (.701 versus .698 in item 45), but the highest absolute average cross-loading for item 39 (.285) was substantially higher than item 45 (.162).

The remaining 3-Item solution for the compensation/benefits content dimension reports an average reliability (.871) that is only slightly lower than the previous iteration. However, the average primary loading has increased (.828) while also producing a decrease in the absolute average of cross-loadings (.049) and a decrease in the average absolute maximum (.118). Within the compensation/benefits content dimension, it is the rewards area that carries the most significant amount of cross-loading influence. Overall, the remaining 3-Item solution does a good job in maintaining construct validity while also reporting a favorable reliability value.

Variety (6 of 10): This content dimension is defined as *a work environment that provides an assortment of tasks, locations, and goals that result in diversity.* The factor consists of five items, which appear as items 3, 17, 28, 36, and 49 in the actual survey.

3. Experiencing changes in your daily tasks.

17. Having variety in your assignments.

28. Being able to do a wide range of tasks.

36. Doing many different things on the job.

49. Having a broad assortment of things to do.

The five items designated to identify the variety content dimension are generally effective in the 5-Item model. The average reliability for variety (Omega = .890) from across the three areas (importance, rewards, needs) is well above the minimum (.70). The average primary loading in this content dimension is .784 and the absolute average of the cross-loadings is .064 with an average absolute maximum value of .140. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within variety, it was decided to drop item 3 (VAR1 – *Experiencing changes in your daily tasks.*) Item 3 has the lowest average primary loading (.627) and the lowest primary loading within each of the three areas (importance, rewards, needs).

In the resulting 4-Item solution for the variety content dimension, we see the average reliability move slightly down (.884) from the previous solution. The average primary loading also moves slightly higher (.809) and the absolute average of the cross-loadings moves slightly lower (.077) with a higher average absolute maximum value of .174. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within the new 4-Item solution for Variety, it was decided to drop item 28 (VAR3 – *Being able to do a wide range of tasks.*). Item 28 reported the second lowest average primary loading in the 4-Item solution (.793 versus .757 in item 17), but the highest absolute average cross-loading for item 28 (.270) was substantially higher than item 17 (.150).

The remaining 3-Item solution for the variety content dimension reports an average reliability (.861) that is only slightly lower than the previous iteration. However, the average primary loading has increased (.820) while also producing a decrease in the absolute average of cross-loadings (.044) and a decrease in the average absolute maximum (.133). Within the variety content dimension, it is the importance area that carries the most significant amount of cross-loading influence. Overall, the remaining 3-Item solution does a good job in maintaining construct validity while also reporting a favorable reliability value.

Teammates (7 of 10): This content dimension is defined as *the group of people in the work environment form cohesive bonds that exhibit mutual support and trust between individuals.* The factor consists of five items, which appear as items 1, 11, 30, 38, and 44 in the actual survey.

1. Forming friendships with other people in your unit.

11. Getting to know your teammates quite well.

30. Working with a spirit of cooperation among your team members.

38. Developing strong ties with your team members.

44. Having a solid sense of camaraderie with the members in your team.

The five items designated to identify the teammates content dimension are effective in the 5-Item model. The average reliability for teammates (Omega = .895) from across the three areas (importance, rewards, needs) is well above the minimum (.70). The average primary loading in this content dimension is .790 and the absolute average of the cross-loadings is .055 with an average absolute maximum value of .121. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within teammates, it was decided to drop item 1 (TEM1 – *Forming friendships with other people in your unit.*) Item 1 has the lowest average primary loading (.586) and the second lowest absolute average maximum (.149).

In the resulting 4-Item solution for the teammates content dimension, we see the average reliability rise slightly higher (.900) from the previous solution. The average primary loading moves higher (.831) and the absolute average of the cross-loadings moves slightly lower (.049) with a higher average absolute maximum value of .161. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within the new 4-Item solution for teammates, it was decided to drop item 30 (TEM3 – *Working in a spirit of cooperation among your team members.*). In the 4-Item solution, Item 30 reported the lowest average primary loading (.795) and the highest absolute average maximum (.269).

The remaining 3-Item solution for the teammates content dimension reports an average reliability (.885) that is lower than the previous iterations. However, the average primary loading has risen substantially (.848) from the original solution while also decreasing the absolute average of cross-loadings (.044) and the average absolute maximum cross-loadings (.103). Overall, the remaining 3-Item solution does a good job in maintaining construct validity while also reporting a reliability value that is the second highest across all content dimensions.

Challenge (8 of 10): This content dimension is defined as *a demanding or stimulating work environment that requires an individual or team to test themselves.* The factor consists of five items, which appear as items 7, 12, 21, 33, and 50 in the actual survey.

7. Having to solve difficult problems.

12. Being constantly challenged.

21. Doing assignments that are demanding.

33. Working on tasks that make you push yourself.

50. Tackling assignments that are really tough.

The five items designated to identify the challenge content dimension are effective in the 5-Item model. The average reliability for challenge (Omega = .923) from across the three areas (importance, rewards, needs) is well above the minimum (.70). The average primary loading in this content dimension is .840 and the absolute average of the cross-loadings is .050 with an average absolute maximum value of .107. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within challenge, it was decided to drop item 7 (CHA1 – *Having to solve difficult problems.*) Item 7 has the lowest average primary loading (.773).

In the resulting 4-Item solution for the challenge content dimension, we see the average reliability decrease slightly (.837) from the previous solution. The average primary loading moves slightly higher (.846) and the absolute average of the cross-loadings moves slightly higher (.055) with a higher average absolute maximum value of .150. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within the new 4-Item solution for challenge, it was decided to drop item 12 (CHA2 – *Being constantly challenged.*). In the 4-Item solution, Item 12 reported the lowest average primary loading (.824) and the second highest absolute average maximum (.156). Item 21 (CHA3 – *Doing assignments that are demanding.*) was also reworded during the review. Instead of using *assignments* in the identification of this

content dimension, I felt it was more appropriate to align the language with greater frequency. The new wording for item 21 now includes *work* rather than *assignments* (Item 21, CHA3 – *Doing work that is demanding.*) This revision is included in the Officer Needs-Rewards Survey that is being currently administered, but it is not in the results below.

The remaining 3-Item solution for the challenge content dimension reports an average reliability (.888) that is lower than the previous iterations. However, the average primary loading has risen slightly (.852) but the absolute average of cross-loadings (.063) and the average absolute maximum cross-loadings (.199) have both increased. Overall, the remaining 3-Item solution does a good job in maintaining construct validity while also reporting a reliability value that is the highest across all content dimensions.

Way of Life (9 of 10): This content dimension is defined as *the result of balancing work requirements, family obligations, and personal aspirations towards an acceptable equilibrium.* The factor consists of five items, which appear as items 6, 19, 26, 32, and 42 in the actual survey.

6. Being able to balance work with the rest of your life.

19. Keeping work from interfering with your personal life.

26. Leading the kind of personal life you desire.

32. Having a fulfilled life outside of work.

42. Maintaining strong relationships with friends and family.

The five items designated to identify the way of life content dimension are generally effective in the 5-Item model. The average reliability for way of life (Omega = .859) from across the three areas (importance, rewards, needs) is well above the minimum (.70). The average primary loading in this content dimension is .741 and the absolute average of the cross-loadings is .083 with an average absolute maximum value of .164. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within way of life, it was decided

to drop item 19 (WOL2 – *Keeping work from interfering with your personal life.*) Item 19 has the lowest average primary loading (.677).

In the resulting 4-Item solution for the way of life content dimension, we see the average reliability move slightly down (.837) from the previous solution. The average primary loading moves slightly higher (.748) while the absolute average of the cross-loadings (.086) and the average absolute maximum value (.213) both move slightly higher. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within the new 4-Item solution for way of life, it was decided to drop item 42 (WOL5 – *Maintaining strong relationships with friends and family.*). Item 42 reported the lowest average primary loading (.693) and the highest absolute average cross-loading (.337).

The remaining 3-Item solution for the way of life content dimension reports an average reliability (.814) that is lower than the previous iteration. However, the average primary loading has increased (.769) while also producing a decrease in the absolute average of cross-loadings (.063) and a decrease in the average absolute maximum (.167). Within the way of life content dimension, it is the importance area that carries the most significant amount of cross-loading influence. Overall, the remaining 3-Item solution does a good job in maintaining construct validity while also reporting an acceptable reliability value that is the lowest across all dimensions.

Inspirational Leadership (10 of 10): This content dimension is defined as *the degree to which senior decision makers foster a positive climate that is supportive and inspirational.* The factor consists of five items, which appear as items 5, 16, 27, 37, and 46 in the actual survey.

5. Having senior leaders who inspire you.

16. Working for officers who make you want to achieve your absolute best.

27. Commanders who bring out the best in their subordinates.

37. Leaders who make junior officer development a priority.

46. Senior officers who foster a positive climate among junior officers.

The five items designated to identify the inspirational leadership content dimension are effective in the 5-Item model. The average reliability for inspirational leadership (Omega = .908) from across the three areas (importance, rewards, needs) is well above the minimum (.70). The average primary loading in this content dimension is .815 and the absolute average of the cross-loadings is .044 with an average absolute maximum value of .101. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within inspirational leadership, it was decided to drop item 5 (INS1 – *Having senior leaders who inspire you.*) Item 5 has the lowest average primary loading (.753) and the lowest primary loading within each of the three areas (importance, rewards, needs).

In the resulting 4-Item solution for the inspirational leadership content dimension, we see the average reliability move down slightly (.890) from the previous solution. The average primary loading moves slightly higher (.818) and both the absolute average of the cross-loadings (.051) and the average absolute maximum (.151) also increase. In a review of the absolute average cross-loadings and absolute maximum cross-loadings within the new 4-Item solution for inspirational leadership, it was decided to drop item 37 (INS4 – *Leaders who make junior officer development a priority.*). Item 37 reported the lowest average primary loading (.789) and the highest absolute maximum cross-loading for this content dimension. There are significant and substantial cross-loadings with leadership opportunity in both importance and needs (.269 and .186, respectively).

The remaining 3-Item solution for the inspirational leadership content dimension reports an average reliability (.870) that is lower than the previous iterations. However, the average primary loading has increased (.830) while also producing a decrease in the absolute average of

cross-loadings (.032) and a decrease in the average absolute maximum (.093). The 3-Item solution for inspirational leadership is the only instance within all content dimensions where there are no significant cross-loadings present. Overall, the remaining 3-Item solution does a good job in maintaining construct validity while also reporting a favorable reliability value.

Model Fit (10-Factor Models and Full 30-Factor Model)

The assessment of model fit will be reviewed in four parts: rewards, needs, importance, and the full model. Rewards, needs, and importance are 10-factor models and the full model combines all items into a 30-factor model. The model estimation uses the maximum likelihood procedure which is an iterative process where the starting value of parameter estimates are successively changed until the produced estimates are close to the sample variances and covariances that are specified by the model. The following written analysis of fit uses the final 3-item survey resulting from the explanation above, however the 5-item and 4-item fit statistics are reported in Table 8 for ease of comparison. See Table 8 for a complete review of model fit (5-Item, 4-Item, 3-Item, and full model) using the cadet pretest data set.

The chi-square statistic for each 10-factor model (3-items per factor) model is significant. The reported chi-square from the minimum fit function (MFF) tests the deviation between the original and the reproduced covariance matrices. Larger chi-square values indicate greater deviations which would ideally result in non-significant results that would indicate adequate model fit. The root mean squared error of approximation (RMSEA) for each 10-factor model reports a value that is within acceptable range to assume close fit (Hu & Bentler, 1999). The comparative fit index (CFI), in which the covariances among all input indicators are fixed to zero, are all at acceptable levels (Hu & Bentler, 1999).

Rewards. The minimum fit function chi-square value of 1,114.681 is significant. The root mean squared error of approximation (RMSEA) which adjusts its value per degree of freedom is .052. The RMSEA value is less than .06 which represents close fit (Browne & Cudeck, 1993). The comparative fit index (CFI), in which the covariances among all input indicators are fixed to zero, is reported at .954 which is slightly greater than the .95 suggested minimum (Hu & Bentler, 1999).

Needs. The minimum fit function chi-square value of 1,146.216 is significant. The RMSEA is .053. The RMSEA value is less than .06 which represents close fit. CFI is reported at .950 which is equal to the .95 suggested minimum.

Importance. The minimum fit function chi-square value of 1,276.978 is significant. The RMSEA is .057. The RMSEA value is slightly less than .05 which represents close fit. CFI is reported at .939 which is slightly less than the .95 suggested minimum.

Full Model. The full model includes 30 factors: 10 rewards, 10 needs, and 10 importance. The minimum fit function chi-square value of 6331.146 is significant. The RMSEA is .033 which represents close fit. CFI is reported at .947 which is slightly less the .95 suggested minimum.

The proportion of true score variance is represented by the Omega coefficient. The reliabilities of each content dimension are all greater than the minimum threshold of .70 suggested by Nunnally (1978). The lowest reliability is reported in the recognition of potential (Omega= .788) content dimension as it refers to importance. The highest reliability is reported in the challenge (Omega= .907) content dimension as it refers to rewards. The average reliability for the 10 content dimensions for importance (Avg Omega= .847) is the lowest, and the average reliability for the 10 content dimensions for rewards (Avg Omega= .863) is the highest, with

needs falling close behind (Avg Omega= .862). Overall, the revised reliabilities for the 3-item version of the Officer Needs-Rewards Survey remain promising. See Tables 9, 10, and 11 for a detailed review of primary loading per item and reliability coefficients reported by the three areas of rewards, needs, and importance for the 3-Item cadet pretest.

Any factor correlations that are not significantly less than unity are a source of concern (Bagozzi & Phillips, 1982). The previous criterion of .85 was used as a minimum standard for discriminant validity. The three factor correlations that were greater than .85 are now reported at lower levels and the discriminant validity of these factors are not a concern. All correlations are within acceptable ranges and the highest reported correlation was .754 between the need and importance for compensation and benefits. Discriminant validity from the confirmatory factor analysis was also maintained in a review of the covariance matrix. The highest reported correlation was .827 reported between the rewards from variety and challenge. Discriminant validity among traits is achieved because all trait correlation differs significantly from 1.00. The factor correlations from the covariance matrix are all significantly less than unity. The correlations between content dimensions per areas of rewards, needs, and importance were analyzed using pairwise correlations. The highest correlations were found between factors expressing needs and importance which is expected. See Table 12 for the phi matrix correlations and Table 13 for the pairwise correlations.

Given the performance of the 3-item survey in the cadet pretest, it is now possible to shift our focus to the review of the data provided by the revised survey in the officer sample. Study 2 will cross validate the survey's effectiveness with another confirmatory analysis of the new data set and it will also extend the examination to the relationship between needs and rewards as applied to job satisfaction. Additionally, the results of job satisfaction on the secondary outcomes will be developed.

CHAPTER 5: STUDY 2, ANALYSIS OF OFFICER NEEDS-REWARDS SURVEY

Samples

The revised survey was administered to a large range of officers through a military social networking website (RallyPoint) and a focused group of mid-career officers at the Command and General Staff College (Fort Leavenworth, KS). The samples for the revised survey represent three categories of officers based on years of service in the Army. The junior officer population is represented by officers who are within their first eight years of service. The mid-career officer population is represented by officers who are in the window from nine years of service to 20 years of service. Finally, the senior officer population is represented by officers who have greater than 20 years of service.

Command and General Staff College (CGSC). CGSC is primarily conducted at one location – Fort Leavenworth, Kansas. Selection to the resident course at CGSC is a signal to the officer that the Army considers them as a valued asset with a future in the service. CGSC combines officers from all branches and functional areas (areas of expertise beyond the initial branch). This population of select officers is engaged in secondary professional military education (PME) which occurs approximately 10-12 years after commissioning. By this time in the officer career path, cohorts will have experienced some voluntary turnover, and the Army will have notified many officers that they are not being groomed for continuation in the military. CGSC attendance mirrors a normal academic year, with approximately 1,300 students in attendance. CGSC is an approximate mid-career marker to the minimum 20 years of service required for lifetime retirement benefits. This population faces a significant career crossroad as

they are reaching a "point of no return" if they intend to gain any experience in a civilian industry. Leaving the Army at this point induces some uncertainty, as it means a career change at a relatively older age.

The current class at CGSC consists of 1,042 Army officers (senior Captains and Majors). The revised Officer Needs-Rewards Survey was administered online, over a three-week period with two email reminders. Survey participation was voluntary and it was subject to higher levels of security which required respondents to login using their Common Access Card (CAC). The data was collected with assistance from OEMA technical experts. The administration of the Officer Needs-Rewards Survey resulted in 159 completed surveys for a response rate of 15%.

RallyPoint (www.rallypoint.com). RallyPoint was founded in 2012 by two military veterans. The military and professional networking site connects active duty, retired, and veteran military members across all services. The website provides the opportunity to connect with other members to explore career opportunities in the active forces and in the private sector. Like Facebook and LinkedIn, RallyPoint allows members to search for others who share common interests, locations, and experiences. The website is frequented by active duty, retired, and veteran officers representing all components of the Army, including the Army National Guard and US Army Reserves. At the time of administration, the officer population of 45,329 was comprised of 16 Generals (GEN), 10 Lieutenant Generals (LTG), 67 Major Generals (MG), 131 Brigadier Generals (BG), 2,708 Colonels (COL), 6,209 Lieutenant Colonels (LTC), 8,178 Majors (MAJ), 15,735 Captains (CPT), 7,109 First Lieutenants (1LT), and 5,182 Second Lieutenants (2LT).

The revised Officer Needs-Rewards Survey was administered over a one month period with two reminders to the RallyPoint members. This administration used Qualtrics survey

software provided by the University of North Carolina at Chapel Hill. The survey was built using response sequences that align the respondent's status (active duty, retired, veteran) and component (Active Duty, Army National Guard, or US Army Reserves) with their version of the survey. The administration of the Officer Needs-Rewards Survey on RallyPoint resulted in 190 completed surveys.

The total sample size resulted in 349 observations. The sample was comprised of 74% active duty officers, 7% ARNG or USAR officers, 10% retired officers (greater than 20 years of service), and 8% veteran officers (departed Army prior to 20 year minimum for retirement). The sample represented six different ranks from the officer corps: colonel (1%), lieutenant colonel (17%), major (52%), captain (20%), first lieutenant (7%), and second lieutenant (3%). The sample also represented a large number of commissioning sources and year groups. Of the three commissioning sources, 59% were from the ROTC, 23% were from USMA, and 18% were from OCS. The year of commissioning included a broad range, from 1967 to 2015; however, the past 20 years (1995-2015) accounted for 87% of the responses. All seventeen branches in the Army were represented in the survey. The greatest participation was from Infantry, Aviation, and Armor. All specialty branches and functional areas were represented in the survey. There were 195 (57%) officers that did not leave their initial branch, 38 (11%) conducted a branch detail or transfer, and the largest functional area represented was Logistics (FA90). The sample was largely comprised of married (80%) white (87%) males (87%).

The representativeness of this sample was evaluated relative to the Army's active duty officer numbers provided in fiscal year 2014 (United States Department of Defense, 2014). The amount of female active duty officers is slightly larger in the total Army (16% female in Army; 13% female in sample). The representation of white active duty officers is smaller in the total

Army (73% white in Army; 87% white in sample). The representation of married active duty officers is smaller in the total Army (57% married in Army; 80% married in sample). The sample of officers per branch is heavily weighted by responses from Infantry, Aviation, and Armor officers (Infantry is 7.6% of Army, 17.4% in sample; Aviation is 10.2% in Army, 15.4% in sample; Armor is 3.7% in Army, 9.0% in sample). Only 107 of the 340 (32%) respondents (nine did not answer this question) departed their initial branch and entered into a specialty branch or functional area. Another 38 (11%) reported that they conducted a branch transfer or branch detail. The remaining 195 respondents did not depart their initial branch (57%). The sample of officers who departed their initial branch for a specialty branch or functional area are more heavily weighted by the Logistics functional area (39 of 107, 36%) than when compared to the Army (13% in the Army; 36% in the sample). The result in the sample as a whole is overrepresentation by Infantry, Aviation, and Armor, as well as the Logistics functional area when evaluated against the Army. In summary, the sample used in this study is slightly less female, less diverse, more married, and more representative of specific branches and functional areas than the overall population in the Army.

Measures

The measures in this study were all adapted to comply with common terminology that is descriptive of job characteristics and outcomes that are common in the Army at the most proximal level of analysis – the individual and team or unit level. The Officer Needs-Rewards Survey (developed in Study 1) measures 10 content dimensions: Leadership Opportunity, Autonomy, Meaningful Purpose, Recognition of Potential, Compensation/Benefits, Variety, Teammates, Challenge, Way of Life, and Inspirational Leadership. These content dimensions, or job characteristics, are measured in terms of their importance, the amount that is present in their

current job (rewards), and the amount that the individual desires (needs). Each content dimension is measured with 3 items which results in 30 items measuring importance of the dimensions, 30 items measuring the rewards in the dimension, and 30 items measuring the needs in the dimension.

The items that comprise the Officer Needs-Rewards Survey were modified to translate the intent of the item in appropriate Army language. The measures of importance in each content dimension were rated on a 7-point scale ranging from *Not Important at All* to *Extremely Important*, and these ratings were averaged to create importance scores ranging from 1 to 7. The measures of needs and rewards in each content dimension were rated on a 7-point scale ranging from *None At All* to an *Extreme Amount*, and these ratings were averaged to create needs and rewards scores ranging from 1 to 7. The online survey offered the measurement of importance questions in one section, and then offered a comparison of *how much did you have* versus *how much did you want* per job characteristic in a shared question. The resulting responses are parallel to the respondent stating the rewards versus the needs per content dimension. The resulting scores from the needs measure and from the rewards measure were scale centered by subtracting the scale midpoint (i.e., 4) to reduce multi-collinearity and to more easily facilitate interpretation in the quadratic regression analysis.

The primary outcome of this study is job satisfaction, and the secondary outcomes that complete the proposed framework are organizational identification, in-role performance, and extra-role behaviors to include helping and voice. Each of these variables were measured at the most proximal level of analysis – the individual and unit or team level. The last section of the Officer Needs-Rewards Survey offers 25 items to the respondent along a 7-point scale ranging from Strongly Disagree to Strongly Agree. There are three items measuring job satisfaction, six

items measuring organizational identification, four items measuring in-role performance, six items measuring helping, and six items measuring voice. A portion of the Work Values Survey (WVS) (Edwards & Cable, 2002) was adapted to measure job satisfaction. The Mael and Ashforth (1992) six-item scale was adapted to measure organizational identification. The four positively worded items from the In-Role Behavior Scale (Williams & Anderson, 1991) were adapted to measure in-role performance. Helping behavior was measured using six of the seven items adapted from the Organ and Konovsky (1989) measure and the Smith, Organ, and Near (1983) measure. Voice was measured using six items adapted from the Van Dyne, Graham and Dienesch (1994) measure and the Whithey and Cooper (1989) measure.

Analyses

In order to cross validate the previous confirmatory factor analysis, the new data set was subject to the same analyses previously described above. The confirmatory factor analysis of the officer data set used the revised survey that contained 3-items per dimension. The analysis was conducted on the same three, 10-factor models and it also incorporated the outcomes in a 5-factor model. Therefore, the full model was enlarged to become a 35-factor model. The only addition in the analysis was the introduction of the standardized root mean square residual (SRMR) to accompany the RMSEA measure. The SRMR provides the square root of the difference between the residuals of the sample covariance matrix and the reproduced covariance model. Hu and Bentler (1999) provide .08 as an acceptable cut-off for SRMR. All other analyses were similar to assess model adequacy and model fit with the same criteria previously described.

The examination of data was conducted using quadratic regression analysis. Surfaces relating N-R fit to job satisfaction were tested using polynomial regression analysis (Edwards,

1994; Edwards & Parry, 1993). The analysis required estimation of quadratic regression equations with job satisfaction (JOBSAT) as the independent variable and needs (N) and rewards (R) measures for the 10 content dimensions as the dependent variables, along with three quadratic terms that were constructed from the measures (i.e., rewards squared (R^2), the product of rewards and needs (RN), and needs squared (N^2)). The general form of the equation is:

$$\text{JOBSAT} = b_0 + b_1R + b_2N + b_3R^2 + b_4RN + b_5N^2 + e. \quad (1)$$

In equation (1) above, JOBSAT represents job satisfaction, *R* represents rewards, and *N* represents needs. The rewards and needs measure for each of the 10 content dimensions are independently tested in their relationship with job satisfaction.

The use of response surface methodology (Edwards & Parry, 1993) illustrates the shape of the corresponding three dimensional surfaces that result from each equation. Of specific interest is the shape of the surface along the line of misfit ($N = -R$) and the line of fit ($N = R$). The line of misfit ($N = -R$) corresponds with part A of hypotheses 1 – 10 (i.e. H1A – H10A), and the line of fit ($N = R$) corresponds with part B of hypotheses 1 – 10 (i.e. H1B – H10B). The X, Y plane of the three dimensional surface describe the rewards and needs of the specific content dimension, and the Z-axis represents the outcome (JOBSAT). See Figure 2 for a visual depiction of the surface area for the leadership opportunity content dimension. The line of misfit ($N = -R$) runs diagonally from left to right across the x, y plane defined by rewards and needs, while the line of fit ($N = R$) runs perpendicular to the line of misfit, running from the near corner to the far corner of the horizontal plane.

In moving from left to right along the line of misfit ($N = -R$), rewards increase toward needs and upon crossing the line of fit ($N = R$) rewards are greater than needs. The shape along

the line of misfit ($N = -R$) can be tested by setting N equal to $-R$ in equation (1) and solving for coefficients on R and R^2:

$$\text{JOBSAT} = b_0 + b_1R + b_2(-R) + b_3R^2 + b_4R(-R) + b_5(-R)^2 + e$$

$$\text{JOBSAT} = b_0 + b_1R - b_2R + b_3R^2 - b_4R^2 + b_5(R)^2 + e$$

$$\text{JOBSAT} = b_0 + (b_1 - b_2)R + (b_3 - b_4 + b_5)R^2 + e. \qquad (2)$$

Equation (2) indicates that along the line of misfit ($N = -R$), the slope of the surface at the point $R = 0$ (and $N = 0$) is represented by the quantity $b_1 - b_2$. Furthermore, the curvature of the surface along the line of misfit ($N = -R$) is represented by the quantity $b_3 - b_4 + b_5$. The point $R = 0$, $N = 0$ represents the center of the horizontal plane which serves as the floor of the surface (needs and rewards data are scaled centered). If job satisfaction increased as rewards increased toward needs and then started to decrease as rewards were substantially larger than needs, the surface would be positively sloped at $R = 0$, and would also have a slight downward curvature (See Figure, 2). In this scenario, $b_1 - b_2$ would be positive and $b_3 - b_4 + b_5$ would be negative. This analysis corresponds with testing in part A of the hypotheses (i.e. H1A – H10A).

In considering the line of fit ($N = R$), the focus is on the line running from the near corner to the far corner of the horizontal plane. In moving from the near corner to the far corner along the line of fit ($N = R$), there is an increase from low levels of rewards and needs (low, low) to high levels of rewards and needs (high, high). The shape along the line of fit ($N = R$) corresponds with part B of the hypotheses (i.e. H1B – H10B). The shape along the line of fit ($N = R$) can be tested by setting N equal to R in Equation (1):

$$\text{JOBSAT} = b_0 + b_1R + b_2(R) + b_3R^2 + b_4R(R) + b_5(R)^2 + e$$

$$\text{JOBSAT} = b_0 + b_1R + b_2R + b_3R^2 + b_4R^2 + b_5(R)^2 + e$$

$$\text{JOBSAT} = b_0 + (b_1 + b_2)R + (b_3 + b_4 + b_5)R^2 + e. \qquad (3)$$

Equation (3) indicates that along the line of fit ($N = R$), the slope of the surface at the point $R = 0$ (and $N = 0$) is represented by the quantity $b_1 + b_2$. Furthermore, the curvature of the surface along the line of fit ($N = R$) is represented by the quantity $b_3 + b_4 + b_5$. The point $R = 0$, $N = 0$ represents the center of the horizontal plane which serves as the floor of the surface (needs and rewards data are scaled centered). If job satisfaction increased linearly moving from low rewards and needs (low, low) to high rewards and needs (high, high), the surface would be positively sloped along the line of fit ($N = R$) at $R = 0$ and would have no curvature, such that $b_1 + b_2$ would be positive and $b_3 + b_4 + b_5$ would not differ from zero.

The shapes of the lines of misfit and fit were tested using procedures for testing linear combinations of dependent regression coefficients (Cohen & Cohen, 1983; Edwards & Parry, 1993). The results from this type of analysis are performed on all 10 content dimensions with the specific needs and rewards from each respective content dimension. The two tests for the fit line and the misfit line are applied to each of the 10 regressions for a total of 20 tests (10 for fit line; 10 for misfit line).

Testing Moderation of Importance. In order to test the degree to which the content dimension is considered central to one's overall job satisfaction, it is critical to include the respondent's level of importance associated with each content dimension. The level of importance for each content dimension is hypothesized to intensify the effects of N-R fit and N-R misfit on job satisfaction. In N-R fit, the moderating effects of importance reflects the premise that misfit is more intense for strongly held needs (Edwards, 1992; Locke, 1976; Rice et al., 1985). In the case of N-R misfit deficiency (rewards are less than needs), it is expected that the result on job satisfaction is worse if the content dimension is rated with high importance. In the case of N-R misfit excess (rewards are greater than needs), it is expected that the result on job

satisfaction is greater or worse depending on the theoretical explanation, if the content dimension is rated with high importance. In the case of N-R fit (high rewards and high needs, or low rewards and low needs), it is expected that the result on job satisfaction will be exasperated for high rewards and high needs or low rewards and low needs. Simply put, if the content dimension is rated with high importance, then the resulting effect on job satisfaction will have greater intensity. Also, if the content dimension is rated with low importance, then the resulting effect on job satisfaction will have less intensity.

In order to incorporate the importance of each content dimension, the general form (Equation 1) will be expanded. A new variable which represents the level of importance (I) for each content dimension will be added to the equation, along with five quadratic terms that were constructed from the measures (i.e., the product of importance and needs (*IN)*, the product of importance and rewards (*IR)*, the product of importance and needs squared (IN^2), the product of importance, needs, and rewards (*INR)*, and the product of importance and rewards squared (IR^2)). The result is:

$$\text{JOBSAT} = b_0+b_1R+b_2N+b_3R^2+b_4RN+b_5N^2+b_6I+b_7IN+b_8IR+b_9IN^2+b_{10}INR+b_{11}IR^2+e. \quad (4)$$

In Equation (4), I represents importance of the content dimension which ranges from 1 to 7. In order to conduct tests of weighted linear combinations, the resulting equations will use one standard deviation above the mean to illustrate high importance and one standard deviation below the mean to illustrate low importance. The calculations for the moderated line of N-R fit ($N = R$) and the moderated line of N-R misfit ($N = -R$) are similar to the previous methods.

The shape along the line of misfit ($N = -R$) can be tested by setting N equal to $-R$ in equation (4) and solving for coefficients on R and R^2:

$$\text{JOBSAT}= b_0+b_1R+b_2(-R)+b_3R^2+b_4R(-R)+b_5(-R)^2+b_6I+b_7I(-R)+b_8IR+b_9I(-R)^2+b_{10}I(-R)R+b_{11}IR^2+e$$

$$\text{JOBSAT} = b_0+b_1R-b_2R+b_3R^2-b_4R^2+b_5R^2+b_6I-b_7IR+b_8IR+b_9IR^2-b_{10}IR^2+b_{11}IR^2+e$$

$$JOBSAT = b_0+(b_1-b_2)R+(b_3-b_4+b_5)R^2+b_6I+(b_7-b_8)IR+(b_9-b_{10}+b_{11})IR^2+e$$

$$JOBSAT = (b_0+b_6I)+[b_1-b_2+(b_7-b_8)I]R+[b_3-b_4+b_5+(b_9-b_{10}+b_{11})I]R^2+e. \quad (5)$$

Equation (5) indicates that along the line of misfit ($N = -R$), the slope of the surface at the point $R = 0$ (and $N = 0$) is represented by the quantity $[b_1-b_2+(b_7-b_8)I]$. Furthermore, the curvature of the surface along the line of misfit ($N = -R$) is represented by the quantity $[b_3-b_4+b_5+(b_9-b_{10}+b_{11})I]$. The point $R = 0$, $N = 0$ represents the center of the horizontal plane which serves as the floor of the surface (needs and rewards data are scaled centered). If job satisfaction increased as rewards increased toward needs and then started to decrease as rewards were substantially larger than needs, the surface would be positively sloped at $R = 0$, and would also have a slight downward curvature (See Figure 2). In this scenario, $[b_1-b_2+(b_7-b_8)I]$ would be positive and $[b_3-b_4+b_5+(b_9-b_{10}+b_{11})I]$ would be negative. This analysis corresponds with testing in the general hypothesis referencing the moderation effects of the importance of each content dimension (H11A). All 10 content dimensions are not listed as specific hypotheses, but the analysis will test all dimensions and result in one general finding.

The shape along the line of fit ($N = R$) can be tested by setting N equal to R in equation (4) and solving for coefficients on R and R^2:

$$JOBSAT = b_0+b_1R+b_2(R)+b_3R^2+b_4R(R)+b_5(R)^2+b_6I+b_7I(R)+b_8IR+b_9I(R)^2+b_{10}I(R)R+b_{11}IR^2+e$$

$$JOBSAT = b_0+b_1R+b_2R+b_3R^2+b_4\,R^2+b_5R^2+b_6I+b_7IR+b_8IR+b_9I\,R^2+b_{10}I\,R^2+b_{11}IR^2+e$$

$$JOBSAT = b_0+(b_1+b_2)R+(b_3+b_4+b_5)R^2+b_6I+(b_7+b_8)IR+(b_9+b_{10}+b_{11})IR^2+e$$

$$JOBSAT = (b_0+b_6I)+[b_1+b_2+(b_7+b_8)I]R+[b_3+b_4+b_5+(b_9+b_{10}+b_{11})I]R^2+e. \quad (6)$$

Equation (6) indicates that along the line of fit ($N = R$), the slope of the surface at the point $R = 0$ (and $N = 0$) is represented by the quantity $[b_1+b_2+(b_7+b_8)I]$. Furthermore, the curvature of the surface along the line of fit ($N = R$) is represented by the quantity $[b_3+b_4+b_5+(b_9+b_{10}+b_{11})I]$.

The point $R = 0$, $N = 0$ represents the center of the horizontal plane which serves as the floor of the surface (needs and rewards data are scaled centered). If job satisfaction increased linearly moving from low rewards and needs (low, low) to high rewards and needs (high, high), the surface would be positively sloped along the line of fit ($N = R$) at $R = 0$ and would have no curvature, such that $[b_1+b_2+(b_7+b_8)I]$ would be positive and $[b_3+b_4+b_5+(b_9+b_{10}+b_{11})I]$ would not differ from zero. This analysis corresponds with testing in the general hypothesis referencing the moderation effects of the importance of each content dimension (H11B). All 10 content dimensions are not listed as specific hypotheses, but the analysis will test all dimensions and result in one general finding.

The remaining analysis examines the relationship of job satisfaction with organizational identification, in-role performance, and extra-role behavior to include helping and voice. Beyond the direct effects of job satisfaction to the aforementioned variables, the analysis is also testing the effects of organizational identification with helping, voice, and in-role performance.

The first relationship of interest is the influence of job satisfaction on organizational identification. The expectation is that increased job satisfaction will result in increased organizational identification. In order to test the relationship, job satisfaction will serve as the independent variable that will predict the outcome of organizational identification.

The second relationships of interest are the influence of job satisfaction on both organizational citizenship behaviors (helping and voice), as well as the relationship between job satisfaction and in-role performance. The expectation is that increased job satisfaction will lead to increased helping activity within the team, and increased use of voice interaction to shape the interactions within the team and associated tasks. Additionally, it is expected that increased job satisfaction will result in an increase of in-role performance of assigned duties. In order to test

each of the three relationships, job satisfaction will serve as the independent variable that will predict the outcome of helping, voice, and in-role performance in three separate regressions.

The last set of relationships are the influence of organizational identification on both organizational citizenship behaviors (helping and voice), as well as the relationship between organizational identification and in-role performance. The expectation is that organizational identification will lead to increased helping activity and increased use of voice to shape the interactions within the team and associated tasks. Additionally, it is expected that increased organizational identification will result in an increase of in-role performance of assigned duties. In order to test each of the three relationships, organizational identification will serve as the independent variable that will predict the outcome of helping, voice, and in-role performance in three separate regressions.

Results, Revised Officer Needs-Rewards Survey (3-Items per Dimension)

The format in the revised survey maintained the same format measuring importance, needs-rewards, and outcomes. The result is three 10-factor models, one 5-factor model, and a 35-factor model. See Appendix I for the revised Officer Needs-Rewards Survey (3-Item Survey).

In order to prove the ability of the survey to consistently measure the content dimensions, it was important to evaluate whether the results from the instrument were reliable. Reliability is focused on the degree to which a measure is free from error. The resulting reliability of the content dimensions in this data are all greater than the minimum threshold of .70 suggested by Nunnally (1978). The performance of the revised survey exceeded expectations in the measurement of the content dimensions. The lowest average reliabilities (omega coefficients) were .842 and .842 reported in the compensation/benefits and meaningful purpose content

dimensions. The highest average reliabilities were .912 and .908 reported in the recognition of potential and teammates content dimensions. Overall, the reliabilities of the Officer Needs-Rewards Survey are well beyond the minimum standards. See Tables 14, 15, 16, and 17 for a complete review of primary loadings per item and reliability measures per content dimension for rewards, needs, importance, and outcomes for the officer sample.

Model Fit (10 Factor Models and 35 Factor Model)

The results of the model fit analyses for the revised survey illustrated similar characteristics when compared to the initial survey. The measures of importance showed lower fit indices than rewards and needs. The overall fit of the model is conducive for use in the proposed framework. See Table 18 for an overview of the model fit for the revised survey by content dimension and rewards, needs, importance, outcomes, and the full model.

Rewards. The minimum fit function chi-square value of 611.89 is significant. The RMSEA is .045 and the standardized root mean square residual (SRMR) is .045. The RMSEA and SRMR values were less than .06 which represents close fit (Hu & Bentler, 1999). CFI is reported at .970 which is greater than the .95 suggested minimum (Hu & Bentler, 1999).

Needs. The minimum fit function chi-square value of 678.42 is significant. The RMSEA is .050 and the SRMR is .046. The RMSEA and SRMR were less than .06 which represents close fit (Hu & Bentler, 1999). CFI is reported at .956 which is slightly greater than the .95 suggested minimum (Hu & Bentler, 1999).

Importance. The minimum fit function chi-square value of 969.14 is significant. The RMSEA is .070 and the SRMR is .061. The RMSEA value is greater than .06, but the SRMR is less than .08 which indicates acceptable fit (Hu & Bentler, 1999). CFI is reported at .910 which is less than the .95 suggested minimum (Hu & Bentler, 1999).

Outcomes. The minimum fit function chi-square value of 911.16 is significant. The RMSEA is .084 and the SRMR is .069. The RMSEA value is greater than .06, but the SRMR is less than .08 which indicates acceptable fit (Hu & Bentler, 1999). The CFI is reported at .878 which is less than the .95 suggested minimum (Hu & Bentler, 1999)

Full Model. The minimum fit function chi-square value of 9,609.51 is significant. The RMSEA is .084 and the SRMR is .044. The RMSEA value is greater than .06, but the SRMR is less than .08 which indicates acceptable fit (Hu & Bentler, 1999). The CFI is reported at .888 which is less than the .95 suggested minimum (Hu & Bentler, 1999)

Any factor correlations that are not significantly less than unity are a source of concern (Bagozzi & Phillips, 1982). There are two factor correlations in the officer data set that were greater than .85. The correlation between importance and needs in the challenge content dimension is reported at .864, and the correlation of helping and voice in the outcomes is reported at .861. The test of these correlations which incorporates the standard errors reports a value significantly less than unity. Therefore, all correlations are within acceptable ranges and discriminant validity is confirmed. Discriminant validity among traits is achieved because all trait correlation differs significantly from 1.00. The factor correlations from the covariance matrix are all significantly less than unity. The correlations between content dimensions in the areas of rewards, needs, and importance were analyzed using pairwise correlations. The highest correlations were found between factors expressing needs and importance which is expected. See Table 19 for the phi matrix correlations and Table 20 for the pairwise correlations of the officer sample.

Descriptive Statistics

The information collected in this survey was all self-reported. The survey collected information on 10 content dimensions (3 items per dimension) and five outcomes of interest. Respondents provided information on the importance of content dimensions, the amount desired (needs), and the amount available (rewards) in their last or current position. Job satisfaction was the primary outcome of interest, and organizational identification, in-role performance, and organizational citizenship behaviors to include helping and voice were the secondary outcomes of interest. The following description will address the content dimensions (importance, needs, and rewards) and the outcomes of interest. Descriptive statistics, reliability estimates, and correlations for all measures are reported in Table 20.

Items pertaining to each content dimension's importance immediately followed the collection of background data. The responses were measured on a 7-point scale (1 to 7) that ranged from *not important at all* to *extremely important*. From the raw data, the highest means reported in reference to importance were found in the inspirational leadership (M=5.95, Sdev=0.84), way of life (M=5.87, Sdev=0.97), and meaningful purpose (M=5.54, Sdev=1.03) content dimensions. The lowest means reported in reference to importance were found in the recognition of potential (M=4.57, Sdev=1.29), variety (M=4.87, Sdev=1.17), compensation/benefits (M=5.03, Sdev=1.12) and content dimensions. As compared to the cadet pretest, both inspirational leadership and meaningful purpose were retained in the top three for both populations; however the officer population replaced teammates with way of life. This makes sense because the cadet population maintains an isolated existence and is not faced with balancing family concerns and has less interaction outside of the institution at West Point. However, the teammates content dimension is important to the officer population as well –

teammates is just outside of the top three, ranked fourth among the content dimensions (M=5.50, Sdev=1.05). In a review of the least important content dimensions, the officer population reported the same three content dimensions as the cadets, but in a different order. The least important content dimension in the cadet population was reported in the compensation/benefits dimension, but the least important in the officer population was reported in the recognition of potential dimension.

Items pertaining to each content dimension's needs and rewards followed the collection of data on importance. Respondents provided information in relation to each job characteristic (content dimension). Specifically, the question asked *how much did you have* and *how much did you want?* The responses were measured on a 7-point scale (1 to 7) that ranged from *None At All* to an *Extreme Amount*. From the raw data, the highest means reported in reference to rewards were found in the challenge (M=4.94, Sdev=1.12), teammates (M=4.92, Sdev=1.10), and variety (M=4.71, Sdev=1.17) content dimensions. The lowest means reported in reference to rewards were found in the recognition of potential (M=3.94, Sdev=1.29), compensation/benefits (M=4.14, Sdev=0.92), and inspirational leadership (M=4.29, Sdev=1.40) content dimensions. As compared to the cadet pretest, both challenge and teammates were retained in the top three for both populations, however the officer population replaced inspirational leadership with variety. The interesting outcome in the comparison of the populations is that the officer population reports inspirational leadership in the bottom three of rewards from their job, while the cadet population reports inspirational leadership in their top three. Additionally, variety is reported by the cadet population in the bottom three of rewards and the officer population reports variety in the top three of rewards. In order to see the significance of this discrepancy, it is worth moving to the needs section of the data. From the raw data, the highest means reported in

reference to needs were found in the inspirational leadership (M=5.62, Sdev=0.84), way of life (M=5.45, Sdev=0.90), and teammates (M=5.34, Sdev=0.97) content dimensions. The lowest means reported in reference to needs were found in the recognition of potential (M=4.33, Sdev=1.19), compensation/benefits (M=4.84, Sdev=0.99), and variety (M=4.96, Sdev=0.96) content dimensions.

The officer population and the cadet population agree that inspirational leadership and teammates are both within the top three of reported needs; however the officer population includes way of life, whereas the cadets report meaningful purpose. The officer population and the cadet population agree on the three lowest needs. The highest need reported by the officer population is inspirational leadership, however this content dimension falls in the lowest three reported rewards within the officer population. Similarly, the second highest need reported by the officer population is way of life and it falls in the lowest four reported rewards within the officer population.

The two most important content dimensions as reported by the officer population are inspirational leadership and way of life. The top two reported needs reported by the officer population are also inspirational leadership and way of life. However, these two content dimensions fall in the eight and seventh places (respectively) when reporting the current or most recent rewards from their job in the Army. Teammates is the only dimension which can be found in the officer population's top three desires or needs and also in the top three rewards from their job. The apparent discrepancy between the needs and rewards from the officer population is worth future investigation.

The last portion of the survey collected data on the respondent's agreement with items as they related to the outcomes of interest. Respondents provided information in relation to their

agreement with statements about their position and their unit. The responses were measured on a 7-point scale (-3 to +3) that ranged from *Strongly Disagree* to *Strongly Agree*. Of the five outcomes of interest, job satisfaction reported the lowest mean (M=1.37, Sdev=1.48). Job satisfaction is the dependent variable used in the analysis of needs and rewards fit. In-role performance (M=2.30, Sdev=1.10), voice (M=1.92, Sdev=0.83), and helping (M=1.86, Sdev=0.77) are the top three reported outcomes from the survey, and organizational identification (M=1.65, Sdev=1.10) fell in the fourth position of the five outcomes. Given that the data was self-reported, there is possible inflation of the respondent's performance in their duties and their extra-role behaviors**.**

Means for all needs measures were higher than their corresponding rewards measures, suggesting that respondents generally wanted more of these dimensions than they currently maintained. However, for each dimension, bivariate distributions of rewards and needs scores showed good dispersion on either side of the line of perfect N-R fit, thereby permitting meaningful tests of fit hypotheses. See Table 21 for a complete review of the bivariate distributions across all content dimensions.

Results, Hypotheses 1-10 (A, B)

Analyses of surfaces pertaining to Hypotheses 1-10 (A, B) are reported in Table 22. See Figures 2 -11 for a visual depiction of the quadratic surfaces for each content dimension. The three dimensional graphs provides a comprehensive review of the needs and rewards, combined with the outcome variable – job satisfaction. The X-axis is labeled actual amount and indicates the rewards portion of the data. The Y-axis is labeled desired amount and indicates the needs portion of the data. The Z-axis is labeled satisfaction and it represents the primary outcome of interest. The lifted surface is the resulting quadratic shape formed from the polynomial

regression analysis previously described. The raw data is represented by the blue dots in the X, Y plane on the floor of the graph. The dashed blue line running from the left corner to the right corner is the line of misfit (N= -R), and the other dashed blue line running from the near corner to the far corner is the line of fit (N=R). The line of misfit and line of fit are perpendicular. The intersection of these two lines represents the center of the graph at N=0, R=0. The solid blue line is the first principal axis which assists in describing the overall orientation of the data and the corresponding quadratic surface. The multi-colored lines on the floor of the graph are contour lines to assist with interpreting the quadratic surface.

Recall that Hypotheses 1A-10A focus on the line of misfit where N = -R. In the case of N-R misfit, there are two conditions – rewards are less than needs in the case of deficiency (R<N), and rewards are greater than needs in the case of excess (R>N). In regards to deficiency, all ten hypotheses make the claim that there will be an increase in job satisfaction as rewards increase toward needs (H1A – H10A). In the case of excess, six of the ten hypotheses make the claim that there will be a decrease in job satisfaction as excess rewards become large or substantial. The decrease in job satisfaction with excess rewards is expected in leadership opportunity (H1A), autonomy (H2A), meaningful purpose (H3A), recognition of potential (H4A), variety (H6A), and challenge (H8A). The remaining four hypotheses make the claim that job satisfaction will continue to increase as rewards exceed needs. The continuing increase in job satisfaction with excess rewards is expected in compensation/benefits (H5A), teammates (H7A), way of life (H9A), and inspirational leadership (H10A).

There are three tests that provide information along the misfit line (N = -R). The first test is an overall test to determine whether or not the surface created by the polynomial regression is flat. This omnibus test includes a check on the slope and curvature. The use of the response

surface methodology requires that the surface show some change in shape. There are three general surfaces that are common in this methodology: 1) concave surfaces (like a dome), 2) convex surfaces (like a bowl), and 3) saddle-shaped surfaces that combine upward and downward curvature (Edwards, 2002). All the surfaces in this analysis generally form concave type surfaces. The second and third tests provide a check on the slope at the center point of the analysis (N=0, R=0) and a check on the curvature along the line of misfit. The slope at the center point is indicated by the $b_1 - b_2$ term and the curvature is indicated by the $b_3 - b_4 + b_5$ term. In the second test, a positive and significant $b_1 - b_2$ term indicates positive slope which means that job satisfaction is increasing as rewards increase towards needs. In the third test, a negative and significant $b_3 - b_4 + b_5$ term indicates negative curvature which means that job satisfaction eventually decreases when excess rewards are substantial. The last important check on the surfaces is the relationship of the first principal axis with the line of fit (N=R). The first principal axis describes the overall orientation of the surface with respect to the X, Y plane formed on the floor of the graph. If the quadratic surface aligned perfectly along the line of fit (N=R), then the line of fit and the first principal axis would be equivalent. The first principal axis is equivalent to one (unity) when it is in perfect alignment with the line of fit. However, when incorporating actual data, the first principal axis can rotate and possibly effect the results for the line of misfit calculations. In the explanation of the findings, the location of the first principal axis will be included in the analysis of each hypothesis.

In all content dimensions, along the line of misfit (H1A – H10A), it is reported that the surfaces have appropriate shape for the analysis. All content dimensions report significant results in the overall test. In the case of deficiency (R<N) along the line of misfit, all proposed hypotheses (H1A – H10A) require a positive slope as rewards increase towards needs. Support

for the positive slope required in the second test must report a positive value in the $b_1 - b_2$ term. Nine of the ten content dimensions report positive values. The variety content dimension (H6A) is the only negative coefficient in regards to slope along the line of misfit in the case of deficiency. All content dimensions report a negative curvature coefficient, however only eight of the ten are significant above the $p<.05$ level.

In eight of the ten content dimensions, along the line of fit (H1B – H10B), it is reported that the surfaces have appropriate shape for the analysis. The two content dimensions that fail this test are compensation/benefits and way of life. Along the line of fit (N=R), the second and third tests provide a check on the slope at the center point of analysis (N=0, R=0) and a check on the curvature along the line of fit. If job satisfaction increased from low rewards and needs to high rewards and needs, the surface would be positively sloped along the line of fit and would have no curvature. This requires a positive $b_1 + b_2$ term and also a $b_3 + b_4 + b_5$ value that does not differ from zero. The same eight content dimensions that passed the first test also provide support for the second and third tests. The following explanation will review the hypotheses for each of the content dimensions.

In the leadership opportunity content dimension, H1A was partially supported and H1B was fully supported (See Figure 2 for the three dimensional surface). H1A proposed that job satisfaction would increase as rewards increase toward needs and would continue to increase as rewards exceed needs, decreasing only when excess rewards were substantial. The analysis indicates that job satisfaction increased as rewards increased toward needs and decreased as rewards exceeded needs. The result of the second test indicated a positive value for the slope at the center point (N=0, R=0), however the slope was not significant. The result is that the continuation of increased job satisfaction into excess rewards was not apparent in the data. One

possible cause is found in the position of the first principal axis. The first principal axis was 0.573, and its 95% confidence interval included 1.00, so the surface was not significantly rotated off the line of fit (N=R). However, the less than unity reporting of the first principal axis caused a clockwise rotation that can affect the analysis along the line of misfit. H1B proposed that job satisfaction would be higher when rewards and needs were both high than when both were low. The analysis indicates that satisfaction was higher when rewards and needs were both high than when both were low. All tests in H1B were fully supported.

In the autonomy content dimension, H2A was partially supported and H2B was fully supported (See Figure 3 for the three dimensional surface). H2A proposed that job satisfaction would increase as rewards increase toward needs and would continue to increase as rewards exceed needs, decreasing only when excess rewards were large. The analysis indicates that job satisfaction increased as rewards increased toward needs and decreased as rewards exceeded needs. The result of the second test indicated a positive value for the slope at the center point (N=0, R=0), however the slope was not significant. The result is that the continuation of increased job satisfaction into excess rewards was not apparent. In this case, the first principal axis was 1.34, and its 95% confidence interval included 1.00, so the surface was not significantly rotated off the line of fit (N=R). However, the greater than unity reporting of the first principal axis caused a counter clockwise rotation that can affect the analysis along the line of misfit. H2B proposed that job satisfaction would be higher when rewards and needs were both high than when both were low. The analysis indicates that satisfaction was higher when rewards and needs were both high than when both were low. All tests in H2B were fully supported.

In the meaningful purpose content dimension, H3A and H3B were fully supported (See Figure 4 for the three dimensional surface). H3A proposed that job satisfaction would increase

as rewards increase toward needs and would continue to increase as rewards exceed needs, decreasing only when excess rewards were large. The analysis indicates that job satisfaction increased as rewards increased toward needs and continued to increase as rewards exceeded needs, decreasing only when excess rewards were large. The first principal axis was 2.24, and its 95% confidence interval included 1.00, so the surface was not significantly rotated off the line of fit (N=R). However, the greater than unity reporting of the first principal axis caused a counter clockwise rotation that can affect the analysis along the line of misfit. H3B proposed that job satisfaction would be higher when rewards and needs were both high than when both were low. The analysis indicates that satisfaction was higher when rewards and needs were both high than when both were low. All tests in H3B were fully supported.

In the recognition of potential content dimension, H4A was partially supported and H4B was fully supported (See Figure 5 for the three dimensional surface). H4A proposed that job satisfaction would increase as rewards increase toward needs and would continue to increase as rewards exceed needs, decreasing only when excess rewards were large. The analysis indicates that job satisfaction increased as rewards increased toward needs and continued to increase as rewards exceeded needs. The result of the third test reported a negative curvature along the line of misfit, however the value was not significant so the decrease in job satisfaction resulting from a substantial amount of excess recognition was not supported. The first principal axis was 2.92, and its 95% confidence interval included 1.00, so the surface was not significantly rotated off the line of fit (N=R). However, in this graph, the first principal axis is located outside the range of the data. H4B proposed that job satisfaction would be higher when rewards and needs were both high than when both were low. The analysis indicates that job satisfaction was higher when

rewards and needs were both high than when both were low. All tests in H4B were fully supported.

In the compensation/benefits content dimension, H5A was partially supported and H5B was not supported (See Figure 6 for the three dimensional surface). H5A proposed that job satisfaction would increase as rewards increase toward needs and would continue to increase as rewards exceed needs. The analysis indicates that job satisfaction increased as rewards increased toward needs and decreased as rewards exceeded needs. The result of the second test indicated a positive value for the slope at the center point (N=0, R=0), however the slope was not significant. Furthermore, the test on curvature indicated a significant negative value along the line of misfit. The result is that the continuation of increased job satisfaction into excess rewards was not apparent. In this case, the first principal axis was 0.714, and its 95% confidence interval included 1.00, so the surface was not significantly rotated off the line of fit (N=R). However, the less than unity reporting of the first principal axis caused a clockwise rotation that can affect the analysis along the line of misfit. H5B proposed that job satisfaction would be higher when rewards and needs were both high than when both were low. The analysis indicates that job satisfaction did not differ when rewards and needs were both high than when both were low. The test of the shape and the test of significant positive slope both failed along the line of fit in H5B.

In the variety content dimension, H6A was partially supported and H6B was fully supported (See Figure 7 for the three dimensional surface). H6A proposed that job satisfaction would increase as rewards increase toward needs and would continue to increase as rewards exceed needs, decreasing only when excess rewards were large. The analysis indicates that job satisfaction increased as rewards increased toward needs and decreased as rewards exceeded

needs. This content dimension provided the only negative value for the slope at the center point (N=0, R=0), however the slope was not significant. The result is that the continuation of increased job satisfaction into excess rewards was not apparent. In this case, the first principal axis was 0.797, and its 95% confidence interval included 1.00, so the surface was not significantly rotated off the line of fit (N=R). However, the less than unity reporting of the first principal axis caused a clockwise rotation that can affect the analysis along the line of misfit. H6B proposed that job satisfaction would be higher when rewards and needs were both high than when both were low. The analysis indicates that satisfaction was higher when rewards and needs were both high than when both were low. All tests in H6B were fully supported.

In the teammates content dimension, H7A was partially supported and H7B was partially supported (See Figure 8 for the three dimensional surface). H7A proposed that job satisfaction would increase as rewards increase toward needs and would continue to increase as rewards exceed needs. The analysis indicates that job satisfaction increased as rewards increased toward needs and decreased as rewards exceeded needs. The result of the second test indicated a positive value for the slope at the center point (N=0, R=0), however the slope was not significant. Furthermore, the test on curvature indicated a marginally significant negative value along the line of misfit. The result is that the continuation of increased job satisfaction into excess rewards was not apparent. The first principal axis was 0.608 (clockwise rotation), and its 95% confidence interval included 1.00, so the surface was not significantly rotated off the line of fit (N=R). H7B proposed that job satisfaction would be higher when rewards and needs were both high than when both were low. The analysis indicates that satisfaction was higher when rewards and needs were both high than when both were low. The test of curvature indicated a marginally significant coefficient along the fit line, so H7B received partial support.

In the challenge content dimension, H8A was partially supported and H8B was fully supported (See Figure 9 for the three dimensional surface). H8A proposed that job satisfaction would increase as rewards increase toward needs and would continue to increase as rewards exceed needs, decreasing only when excess rewards were large. The analysis indicates that job satisfaction increased as rewards increased toward needs and decreased as rewards exceeded needs. This content dimension showed a positive slope at the center point (N=0, R=0), however the slope was not significant. The result is that the continuation of increased job satisfaction into excess rewards was not apparent. In this case, the first principal axis was 1.794, and its 95% confidence interval excluded 1.00, so the surface was significantly rotated counterclockwise off the line of fit (N=R). If the movement of the first principal axis is significant, then results for misfit depend on the absolute levels of needs and rewards. As applied to the Challenge content dimension, the rotation of the first principal axis implies that the greatest satisfaction is found when there is a slight deficiency (R<N) in the rewards and needs comparison, whereas the least satisfaction is found when there is a slight excess (R>N) in the rewards and needs comparison. The rotation of the first principal axis requires examination of the misfit line at the absolute levels of rewards and needs. H8B proposed that job satisfaction would be higher when rewards and needs were both high than when both were low. The analysis indicates that satisfaction was higher when rewards and needs were both high than when both were low. All tests in H8B were fully supported.

In the way of life content dimension, H9A was partially supported and H9B was not supported (See Figure 10 for the three dimensional surface). H9A proposed that job satisfaction would increase as rewards increase toward needs and would continue to increase as rewards exceed needs. The analysis indicates that job satisfaction increased as rewards increased toward

needs and decreased as rewards exceeded needs. The results from this content dimension show support for the global test on shape and the positive slope at the center of the graph, however it also shows a significant negative curvature which would indicate that excess rewards eventually result in decreased job satisfaction. However, this content dimension hypothesized a continuation of increased job satisfaction in the excess rewards scenario. The first principal axis was 1.96, and its 95% confidence interval included 1.00, so the surface was not significantly rotated off the line of fit (N=R). However, the greater than unity reporting of the first principal axis caused a counter clockwise rotation that can affect the analysis along the line of misfit. H9B proposed that job satisfaction would be higher when rewards and needs were both high than when both were low. However, the analysis indicates that job satisfaction did not differ when rewards and needs were both high than when both were low. The global test on the shape of the surface and the test for positive slope failed to meet requirements in H9B.

In the inspirational leadership content dimension, H10A and H10B were fully supported (See Figure 11 for the three dimensional surface). H10A proposed that job satisfaction would increase as rewards increase toward needs and would continue to increase as rewards exceed needs. The analysis indicated an increase in job satisfaction as rewards increased toward needs and it continued the expected increase as rewards exceed needs. The surface passed the global test on shape, the positive slope requirement at the center of the graph, and the lack of negative curvature to indicate the continuation of increased job satisfaction. The first principal axis was 7.117, and its 95% confidence interval excluded 1.00, so the surface was significantly rotated counterclockwise off the line of fit (N=R). If the movement of the first principal axis is significant, then results for misfit depend on the absolute levels of needs and rewards. Given a specified level of rewards and needs, the amount of satisfaction can be determined. The

quadratic surface implies that job satisfaction is maximized with high needs, high rewards and low needs, high rewards. Similarly, the quadratic surface implies that job satisfaction is minimized with high needs, low rewards and low needs, low rewards. The rotation of the first principal axis requires examination of the misfit line at the absolute levels of rewards and needs. H10B proposed that job satisfaction would be higher when rewards and needs were both high than when both were low. The analysis indicates that satisfaction was higher when rewards and needs were both high than when both were low. All tests in H10B were fully supported.

Results, Hypotheses 11 (A, B)

The general hypotheses (H11A, B) using importance as a moderator between N-R fit and job satisfaction was analyzed for each content dimension. Recall that the hypotheses (H11A, B) proposed that using importance as a moderator would increase the intensity of the relationship between N-R fit and job satisfaction. The complexity of the quadratic equation results in a larger number of coefficients, however the combination of these coefficients are applied in the same fashion for the slope and curvature analysis. There is an omnibus test for the five new importance variables (*IR, IN, IR^2, INR, and IN^2*) that provides a check on the effects of moderation, and then the same three tests used in the previous analysis are applied while also incorporating both high and low measures of importance (adding or subtracting one standard deviation from the mean to indicate high and low importance, respectively). The omnibus test for each of the content dimensions indicated that there was no significant moderation of importance. Therefore, H11A and H11B were not supported.

Results, Hypotheses 12, 13 (A-C), 14 (A-C)

The analysis also examined the relationship of job satisfaction with numerous outcomes of interest to include organizational identification, in-role performance, and organizational citizenship behaviors to include helping and voice (H12, H13A-C). The expectation presented in the hypotheses indicates that job satisfaction will have a positive relationship with all the secondary outcomes (in-role, helping, and voice). Furthermore (H14A-C), it is hypothesized that organizational identification will have a positive relationship with all the secondary outcomes (in-role, helping, and voice). See Figure 12 for the proposed model with coefficients listed per pathway.

The relationship between job satisfaction and organizational identification indicated a highly significant ($p<.01$) coefficient of .358. The result indicates that increased job satisfaction is associated with increased organizational identification at the unit or team level. This finding provides support for H12. The relationship between job satisfaction and helping indicated a highly significant ($p<.01$) coefficient of .257. The result indicates that increased job satisfaction is associated with increased helping at the unit or team level. This finding provides support for H13A. The relationship between job satisfaction and voice indicated a highly significant ($p<.01$) coefficient of .278. The result indicates that increased job satisfaction is associated with increased voice at the unit or team level. This finding provides support for H13B. The relationship between job satisfaction and in-role performance indicated a highly significant ($p<.01$) coefficient of .138. The result indicates that increased job satisfaction is associated with increased in-role performance at the unit or team level. This finding provides support for H13C. As proposed in the hypotheses, there is support for increased job satisfaction resulting in

increased organizational identification, in-role performance, and organizational citizenship behaviors to include helping and voice. See Table 23 for the results of H12, H13A-C.

The relationship between organizational identification and helping indicated a highly significant ($p<.01$) coefficient of .350. The result indicates that increased organizational identification is associated with increased helping at the unit or team level. This finding provides support for H14A. The relationship between organizational identification and voice indicated a highly significant ($p<.01$) coefficient of .342. The result indicates that increased organizational identification is associated with increased voice at the unit or team level. This finding provides support for H14B. The relationship between organizational identification and in-role performance indicated a highly significant ($p<.01$) coefficient of .165. The result indicates that increased organizational identification is associated with increased in-role performance at the unit or team level. This finding provides support for H14C. As proposed in the hypotheses, there is support for increased organizational identification resulting in increased helping, voice, and in-role performance. See Table 23 for the results of H14A-C.

CHAPTER 6: DISCUSSION

Summary of Key Findings by Hypotheses

The results of this study are generally consistent with the hypothesized relationships between N-R fit and job satisfaction, as well as job satisfaction and the secondary outcomes of interest. The one general expectation that did not hold true is the moderation of importance between N-R fit and job satisfaction. The following description of the content dimensions will link the findings with the theoretical development of the hypotheses and the review the secondary outcomes of interest.

In the leadership opportunity content dimension, job satisfaction increased as rewards increased toward needs. However, as rewards from leadership opportunity exceeded needs, job satisfaction did not continue to increase as predicted. Instead, job satisfaction was shown to decrease with excess rewards in leadership opportunity. The prediction that job satisfaction would continue to increase as rewards exceeded needs was based on the premise that there would be carryover effects from the autonomy, recognition of potential, and challenge content dimensions. The relatively high correlations from these factors provide support to the claim that leadership opportunities could lead to increased job satisfaction, however equally strong correlations are shown in the meaningful purpose, teammates, and variety content dimensions. It was also predicted that excess leadership opportunities could interfere with needs fulfillment in the teammates and way of life content dimensions. It is possible that the strongest influence in the explanation of excess rewards in the leadership opportunity dimension is explained by the interference of need fulfillment in the balance that officers seek between work, family and

personal aspirations. If this interference is more prevalent than expected, then the desire for excess leadership positions will become less attractive. Another reason for the decrease in job satisfaction resulting from excess rewards is that excess leadership results in greater challenges that may result in negative effects in job satisfaction. The findings confirm that instances where officers maintain high rewards and high needs for leadership opportunity report greater job satisfaction than those who maintain low rewards and low needs. This finding that job satisfaction was higher when rewards and needs are both high than when both are low is consistent with expectations of greater fulfillment and self-actualization in setting and achieving high goals (Alderfer, 1972; Maslow, 1954; Rokeach, 1973). In the leadership opportunity content dimension, 60% of respondents report a deficiency (R<N), 14% report fit (R=N), and 26% report an excess (R>N). The indication is that most officers not only desire increased leadership opportunities, they also gain greater job satisfaction when those aspirations are fulfilled. However, the results of the analysis also indicate that there is a smaller portion of respondents that suffer a decrease in job satisfaction that results from more leadership opportunity.

In the autonomy content dimension, job satisfaction increased as rewards increased toward needs. However, as rewards from autonomy exceeded needs, job satisfaction did not continue to increase as predicted. Instead, job satisfaction was shown to decrease with excess rewards in autonomy. The prediction that job satisfaction would continue to increase as rewards exceeded needs was based on the premise that there would be carryover effects from the leadership opportunity, recognition of potential and challenge content dimensions. The relatively high correlations from these factors provide support to the claim that excess autonomy could lead to increased job satisfaction. It was also predicted that excess autonomy may result in

conservation or depletion of future autonomy if the decrease in guidance and increased independence resulted in negative outcomes. It is possible that the strongest influence in the explanation of excess rewards in the autonomy content dimension is explained by the acceptance of risk resulting from excess rewards in autonomy and no accompanying increase in rewards. If the depletion effects are more prevalent than expected, then the desire for more autonomy may become less attractive or it simply may not be available in the existing military culture. The data indicates that a majority of the respondents report a deficiency in autonomy. This could be indicative of the centralized planning that is common within a military organization. The results also confirm that instances where officers maintain high rewards and high needs for autonomy report greater job satisfaction than those who maintain low rewards and low needs. This finding that job satisfaction was higher when rewards and needs are both high, than when both are low, is consistent with research findings that indicate high demands coupled with high control enable individuals to cope successfully with challenging situations in order to gain increased job satisfaction (Karasek & Theorell, 1990). In the autonomy content dimension, 60% of respondents report a deficiency (R<N), 29% report fit (R=N), and 11% report an excess (R>N). The indication is that most officers not only desire increased autonomy, they also gain greater job satisfaction when that need is fulfilled. However, the results of the analysis also indicate that there is a smaller portion of respondents that suffer a decrease in job satisfaction that results from more autonomy.

In the meaningful purpose content dimension, job satisfaction increased as rewards increased toward needs as predicted in previous research (Super, 1970). Furthermore, as predicted, job satisfaction continued to increase as rewards exceeded needs, decreasing only when excess rewards were large. The continuing increase in job satisfaction was expected to

evolve from carryover effects from inspirational leadership and the teammates content dimensions. The premise of altruistic actions towards a higher cause and a voluntary concern for others is reinforced through collective efforts and inspirational leaders focused on a common commitment (Schwartz, 2012). The relatively high correlation with the teammates and inspirational leadership content dimension seems to support that assertion. It was also proposed that increased commitment to a meaningful purpose could create interference with the more proximal requirements that enable the way of life content dimension. The effects from this possible interference indicate relatively lower correlations that could enable the increase in job satisfaction. The findings indicate that the strongest correlations with the meaningful purpose dimension are found in leadership opportunity and challenge. Therefore, it would seem that the carryover effects were largely influenced by the unpredicted effects resulting from the chance to direct the actions of a group towards a common goal while facing adverse conditions. On the other hand, the lowest correlation, found in the compensation/benefits content dimension illustrate that extrinsic rewards provided the least amount of influence in relation to purposeful contributions. The results also confirm that instances where officers maintain high rewards and high needs for meaningful purpose report greater job satisfaction than those who maintain low rewards and low needs. This finding confirms the relationship of wanting and receiving high levels of meaningful purpose to fulfill goals that go beyond personal interests, but also assist in reaching self-actualization (Maslow, 1954). In the meaningful purpose content dimension, 59% of respondents report a deficiency (R<N), 28% report fit (R=N), and 13% report an excess (R>N). The indication is that most officers not only desire increased meaningful purpose, they also gain greater job satisfaction when that need is fulfilled. However, the results of the analysis

also indicate that if meaningful purpose becomes too large, then a decrease in job satisfaction can result.

In the recognition of potential content dimension, job satisfaction increased as rewards increased toward needs and continued to increase as rewards exceeded needs. In contradiction to the expectation, the findings in recognition of potential did not indicate a decrease as excess rewards became substantial. The prediction that job satisfaction would decrease as recognition became large was based on the premise that there would be depletion effects that would result from excess recognition. The effects of excess recognition were also expected to interfere with the relationships among teammates, however the strength of that influence seems to be less apparent in the findings. The findings indicate that the strongest correlation with recognition is found in the inspirational leadership content dimension. The relationship of these two factors is obvious since the leaders are generally the source of any recognition. The correlation between excess recognition and relationships with coworkers was not extreme. The results also confirm that instances where officers maintain high rewards and high needs for recognition of potential report greater job satisfaction than those who maintain low rewards and low needs. This finding that job satisfaction was higher when rewards and needs are both high than when both are low is consistent with research that describes recognition as a critical portion of self-enhancement (Schwartz, 2012). In the recognition of potential content dimension, 53% of respondents report a deficiency (R<N), 24% report fit (R=N), and 23% report an excess (R>N). The indication is that most officers not only desire increased recognition, they also gain greater job satisfaction when that need is fulfilled. Furthermore, the findings indicate that there is no decrease in job satisfaction in the presence of excess recognition.

In the compensation/benefits content dimension, job satisfaction increased as rewards increased toward needs. However, as rewards from compensation and benefits exceeded needs, job satisfaction did not continue to increase as predicted. Instead, job satisfaction was shown to decrease with excess rewards in compensation and benefits. The prediction that job satisfaction would continue to increase as rewards exceeded needs was based on the premise that there would be carryover and conservation effects from the way of life content dimension and conservation of the excess rewards in compensation and benefits. Excess rewards in compensation and benefits were expected to increase job satisfaction through carryover effects in possible increased quality of life that could result from more money and resources. The correlation with way of life was relatively high however the effects of the carryover did not produce increased job satisfaction in the presence of excess compensation and benefits. Furthermore, the effects of the conservation premise had minimal influence on job satisfaction. The obvious assumption is that more money and resources would improve satisfaction with the job, however the long standing fixed salary paradigm that is based on rank may have driven the results. This assumption is supported by the correlation with the recognition of potential content dimension which is the highest across all factors in relation to compensation and benefits. The results also confirm that instances where officers maintain high rewards and high needs for compensation and benefits report greater job satisfaction than those who maintain low rewards and low needs. This finding that job satisfaction was higher when rewards and needs are both high than when both are low is consistent with research that conceptualizes compensation and benefits in relation to security and self-enhancement (Schwartz, 2012). In the compensation/benefits content dimension, 58% of respondents report a deficiency (R<N), 31% report fit (R=N), and 11% report an excess (R>N). The indication is that most officers not only desire increased compensation and benefits, they

also gain greater job satisfaction when that need is fulfilled. However, the results of the analysis also indicate that there is a smaller portion of respondents that suffer a decrease in job satisfaction that results from more compensation and benefits. This anomaly is most likely a result of the fixed salary expectation that is a longstanding tradition associated with an officer's rank.

In the variety content dimension, job satisfaction increased as rewards increased toward needs. However, as rewards from variety exceeded needs, job satisfaction did not continue to increase as predicted. Instead, job satisfaction was shown to decrease with excess rewards in variety. The prediction that job satisfaction would continue to increase as rewards exceeded needs was based on the premise that there would be carryover effects from the challenge content dimension. Excess rewards in variety were expected to increase job satisfaction through carryover effects in the challenge content dimension by providing more diversity and complexity that could result in increased job satisfaction. The correlation with the challenge content dimension indicated a strong relationship however the effects of the carryover did not produce increased job satisfaction in the presence of excess variety. The effects of excess variety could also interfere with need fulfillment in the leadership opportunity content dimension. The correlation with leadership also indicated a strong relationship with variety and the effects of the interference may have prohibited the prediction of increased job satisfaction with excess variety. The results also confirm that instances where officers maintain high rewards and high needs for variety report greater job satisfaction than those who maintain low rewards and low needs. This finding that job satisfaction was higher when rewards and needs are both high than when both are low is consistent with research that describes the need for stimulation in order to maintain an optimal level of activation (Berlyne, 1960). In the variety content dimension, 45% of

respondents report a deficiency (R<N), 25% report fit (R=N), and 30% report an excess (R>N). The indication is that most officers not only desire increased variety, they also gain greater job satisfaction when that need is fulfilled. However, the results of the analysis also indicate that there is a large portion of respondents that suffer a decrease in job satisfaction that results from more variety.

In the teammates content dimension, job satisfaction increased as rewards increased toward needs. However, as rewards from teammates exceeded needs, job satisfaction did not continue to increase as predicted. Instead, job satisfaction was shown to decrease with excess rewards in teammates. The prediction that job satisfaction would continue to increase as rewards exceeded needs was based on the premise that there would be conservation of the excess rewards and carryover effects from the way of life content dimension. Excess rewards in teammates were expected to increase job satisfaction through carryover effects in the way of life content dimension by providing improved balance between work and personal aspirations that could result in increased job satisfaction. The correlation with the way of life content dimension indicated a moderate relationship and the effects of the carryover did not strongly affect job satisfaction. Furthermore, the conservation effects may have also had weaker effects because the presence of excess rewards did not result in increased job satisfaction. The results also confirm that instances where officers maintain high rewards and high needs for cohesive relationships report greater job satisfaction than those who maintain low rewards and low needs. This finding that job satisfaction was higher when rewards and needs are both high than when both are low is consistent with research that suggests close social support networks provide for enhanced well-being and job satisfaction (Cohen & Wills, 1985). In the teammates content dimension, 47% of respondents report a deficiency (R<N), 36% report fit (R=N), and 17% report an excess (R>N).

The indication is that most officers not only desire increased cohesion in their relationships at work, they also gain greater job satisfaction when that need is fulfilled. However, the results of the analysis also indicate that there is a small portion of respondents that suffer a decrease in job satisfaction that results from closer relationships with teammates.

In the challenge content dimension, job satisfaction increased as rewards increased toward needs. However, as rewards from challenge exceeded needs, job satisfaction did not continue to increase as predicted. Instead, job satisfaction was shown to decrease with excess rewards in challenge. The prediction that job satisfaction would continue to increase as rewards exceeded needs was based on the premise that there would be carryover effects from the variety and teammates content dimensions. Excess rewards in challenge were expected to increase job satisfaction through carryover effects in the variety content dimension by providing stimulating tasks that could result in increased job satisfaction. Furthermore, excess rewards in challenge were also expected to increase job satisfaction through carryover effects in the teammates content dimension by providing adverse conditions that developed more cohesive relationships within the unit. The correlation with the variety content dimension indicated a strong relationship however the effects of the carryover did not produce increased job satisfaction in the presence of excess challenge. The correlation with the teammates content dimension was relatively high however the effects on job satisfaction were minimal. The effects of excess challenge could also interfere with need fulfillment in the leadership opportunity and way of life content dimensions. The correlation with leadership indicated a strong relationship with challenge and the correlation with the balance of work and personal aspirations was weak. The strong correlation with leadership opportunities may have prohibited the increase in job satisfaction that was expected to evolve from excess challenge. The results also confirm that

instances where officers maintain high rewards and high needs for challenge report greater job satisfaction than those who maintain low rewards and low needs. This finding that job satisfaction was higher when rewards and needs are both high than when both are low is consistent with research that describes the need for stimulation in order to maintain an optimal level of activation (Berlyne, 1960). In the challenge content dimension, 41% of respondents report a deficiency (R<N), 32% report fit (R=N), and 27% report an excess (R>N). The indication is that most officers not only desire increased challenge, they also gain greater job satisfaction when that need is fulfilled. However, the results of the analysis also indicate that there is a large portion of respondents that suffer a decrease in job satisfaction that results from more challenge.

In the way of life content dimension, job satisfaction increased as rewards increased toward needs. However, as rewards from way of life exceeded needs, job satisfaction did not continue to increase as predicted. Instead, job satisfaction was shown to decrease with excess rewards in way of life. The prediction that job satisfaction would continue to increase as rewards exceeded needs was based on the premise that there would be carryover effects from the teammates content dimension. Excess rewards in way of life were expected to increase job satisfaction through carryover effects in the teammates content dimension that provided improved balance between work and personal aspirations that could result in increased job satisfaction. The correlation with the teammates content dimension indicated a moderate relationship and the effects of the carryover did not strongly affect job satisfaction. The results also confirm that instances where officers maintain high rewards and high needs for balance in their lives report greater job satisfaction than those who maintain low rewards and low needs. This finding that job satisfaction was higher when rewards and needs are both high than when

both are low is consistent with research that suggests balance in daily life allows for pleasure, gratification, and enjoyment that can enhance well-being and job satisfaction (Freud, 1933; Williams, 1968). In the way of life content dimension, 72% of respondents report a deficiency (R<N), 20% report fit (R=N), and 8% report an excess (R>N). The indication is that most officers not only desire increased balance in their lives, they also gain greater job satisfaction when that need is fulfilled. However, the results of the analysis also indicate that there is a small portion of respondents that suffer a decrease in job satisfaction that results from more balance in their way of life.

In the inspirational leadership content dimension, job satisfaction increased as rewards increased toward needs and it continued to increase as rewards exceeded needs. The prediction that job satisfaction would continue to increase as rewards exceeded needs was based on the premise that there would be carryover effects from the meaningful purpose content dimension. Excess rewards in inspirational leadership were expected to increase job satisfaction through carryover effects in the meaningful purpose content dimension that provided a strong sense of purpose. The correlation with the meaningful purpose content dimension indicated a moderate relationship that could have affected job satisfaction. However, an unpredicted relationship with the recognition of potential content dimension may have resulted in the continuation of job satisfaction associated with inspirational leaders. The results also confirm that instances where officers maintain high rewards and high needs for inspirational leaders report greater job satisfaction than those who maintain low rewards and low needs. This finding that job satisfaction was higher when rewards and needs are both high than when both are low is consistent with research that emphasizes the importance of supervisory relations in the satisfaction of employees (Super, 1970). In the inspirational leadership content dimension, 74%

of respondents report a deficiency (R<N), 19% report fit (R=N), and 7% report an excess (R>N). The indication is that most officers not only desire inspirational leadership, they also gain greater job satisfaction when that need is fulfilled. However, the results of the analysis also indicate that there is a very small portion of respondents that suffer a decrease in job satisfaction that results from an increase in inspirational leadership.

The secondary outcomes of interest in the proposed framework examined the effect of job satisfaction on organizational identification, in-role performance and organizational citizenship behaviors to include helping and voice. The results indicate that there is a strong relationship between job satisfaction and organizational identification. In previous research, the relationship between job satisfaction and organizational identification resulted in the same coefficient reported in this study (DeMoura, et al., 2009). The results indicate that the relationship between job satisfaction and the organizational citizenship behaviors (helping and voice) is slightly weaker than previous research (Bateman & Organ, 1983). In the last relationship, between job satisfaction and in-role performance, the results indicate a strong relationship as compared to previous research that also used a self-reported measure (Van Dyne & LePine, 1998). The results indicate that the relationship between organizational identification and extra-role (helping and voice) as well as in-role performance is as expected. There is a positive effect from organizational identification and the secondary outcomes of interest. In full, the proposed framework suggests that congruence in N-R fit can improve job satisfaction, and increased job satisfaction can improve organizational identification which also affects organizational citizenship behaviors and in-role performance.

Limitations

There are numerous limitations in this study. First, the design of the study was cross-sectional so any inferences that N-R fit caused job satisfaction cannot be verified. The relationships in the remaining pathways for secondary outcomes are also the result of cross sectional data that cannot be verified. Second, all data collected in this sample were self-reported and are subject to common method variance that may inflate inter-item correlations (Podsakoff & Organ, 1986). Third, the findings only pertain to fit between subjective needs and rewards which only measure the person's perception of the environment and the perception of the self (Edwards, 1992; French et al., 1982; Harrison, 1978). Fourth, although the dimensions in the study are correlated, the analysis for N-R fit was conducted for each dimension separately. The correlations can create interpretive difficulties if the goal is to examine the relationship between N-R fit with job satisfaction while holding N-R fit constant on the other dimensions. However, the use of the response surface methodology relies on the relationships between N-R fit on the focal dimension and N-R fit on other dimensions (Edwards & Rothbard, 1999). Fifth, the sample in this study was focused on a unique selection of military members that may not be generalizable to other populations. Finally, the data collected in this study obtained lower response rates which may raise concerns regarding self-selection biases.

Implications of Results

The first goal of this study was to develop a means to collect better information on the needs of the officer corps and the rewards of existing jobs in the Army. The pilot survey used in developing the Officer Needs-Rewards Survey attempted to provide more clarity on the job characteristics that Army officers seek. The content dimensions used in this research are a good starting point that may need further refinement. The second goal was to complement the current

initiatives set forth in the Army talent management strategy. The process used in this research is aligned with the guiding principles described in the recent concept of operations for initiation of new personnel policies as described by senior Army leaders. The third goal was to create a reliable and valid measurement instrument that could facilitate future data collection. The measurement instrument created to capture information on the job characteristics was customized to answer three questions: 1) How important are the job characteristics to Army officers? 2) To what extent do Army officers desire the job characteristics? 3) To what extent do Army career paths provide these job characteristics? The measurement instrument performed up to expectations and provided data that facilitated hypothesis testing. The fourth goal was to test the relationships between fit and other relevant outcomes of interest that could benefit our officers and their units. This goal was focused on answering the following question: How best do we identify, assess, and link an officer's needs with existing rewards in the Army? The proposed framework provides the results of the reported needs of this sample and the rewards of their most recent positions and applies the level of fit to outcomes that benefit the officer and their unit.

For all content dimensions tested in these analyses, job satisfaction increased as rewards increased toward needs. For eight of the content dimensions, job satisfaction decreased as rewards exceeded needs, while two content dimensions reported a continued increase in job satisfaction with excess rewards. For eight of the content dimensions tested in these analyses, job satisfaction was higher for respondents that reported high rewards and high needs, rather than low rewards and low needs. The relationship between job satisfaction and secondary outcomes were significant, and the relationship between organizational identification and the secondary outcomes were also significant. The results of this study not only provided support for the

hypotheses, they also provided supported for the logic behind the hypotheses. The data collected from the survey provided appropriate conditions for meaningful analysis. The methodology employed to generate the results have provided useful information about the needs of our officers and the outcomes that influence their decision making. Collecting and employing better information on the needs of our officers can improve the effectiveness of the Army. Talent management is not a one-sided proposal. The collective talents of our Army are integrated within the needs, desires and aspirations of our leaders. In order to make the Army more effective, we must complete the equation and empower talent management with better information about those leaders' expectations. This study is a good first step in proving that better information is available. The process can be a win for the Army and a win for the officer. The Army can use the information to make better decisions on which officers to retain, and the officer can use the information to make a better decision on whether or not they will remain in the Army.

The last goal was contributing to the existing P-E fit research domain that is focused on the congruence of individual needs and environmental rewards (supplies). The three contributions to the P-E fit research domain encompass the entirety of a research design from initiation to completion. First, the genesis of this study incorporated a custom designed measurement instrument that focused on content dimensions that were derived from the population of interest. The creation of a tailored measurement instrument is a unique strategy that is not common in existing P-E fit research. The resulting performance of the measurement instrument and the practical application of the results should provide better information for the users. Second, the design of this study incorporated hypotheses that test fit, misfit (deficiency), and misfit (excess) in order to unravel the complexities of the mutual interactions between the

person and the environment on an outcome of interest. Finally, this study provided an application of the response surface methodology that appropriately analyzed the results of the inherently three-dimensional data represented by the person, the environment, and the outcome of interest.

Future Research

In order to develop a better understanding of the complexities involved in the interaction between Army officers and the success of the Army as an organization, it would be useful to incorporate a comprehensive strategy that includes a longitudinal collection of data that can empower all facets of P-E fit theory. The intricacies of assessing, developing, employing, and retaining Army officers must involve the application of different types of P-E fit. This study focused on the needs and rewards side of complementary P-E fit which emphasizes the perspective of the officer. However, in the Army's recent history there has been more research examining the demands and abilities side of complementary fit because it emphasizes the perspective and performance of the Army.

The recent applications of demands-abilities (D-A) type fit in the branching process which matches newly commissioned officers to their future career paths should continue. This process is the beginning of an opportunity to collect information on young officers which can improve the Army's ability to make future personnel decisions. An equivalent priority is the incorporation of information collection on the needs and rewards that will also inform future decision making processes from the officer's perspective. The potential for a future longitudinal data base that compiles information on D-A fit and N-R fit is possible.

The Army and its officers can both benefit from a longitudinal study that creates better information. The Army's recent changes in the branching process is collecting better

information from the branches in reference to the demands or job requirements inherent to its function in the larger organization. The branching process is also collecting better information from young officers in reference to their abilities so that they can make better branch choices. With the right decision support data, the Army will provide the officer with an accurate depiction of the required demands of the job, and the officer will provide the Army with an accurate depiction of their capabilities. The result will be improved matching of the officer's capabilities with the specific demands from their branch.

The other side of the D-A fit process is N-R fit. In conjunction with the current data collection in branching, the Army should incorporate measurement of the officer's needs and the potential rewards that exist along their specific career path. The Army would be required to build a better understanding of the rewards that actually exist in each of the career paths. The officer would be required to conceptualize their future and develop a better understanding of their needs, desires and aspirations. With better decision support data on the needs and rewards side of fit, the Army will be able to provide the officer with an accurate depiction of the available rewards from each career path, and the officer will be able to provide the Army with an accurate depiction of their needs, desires, and aspirations. The result will be improved matching of the officer's needs and the specific rewards from their career path.

The combination of decision support data derived from D-A fit and N-R fit can properly represent the perspective of the Army and the perspective of the officer in order to create more mutually beneficial matches. The Army will continue to make the same decision on whether or not to retain an officer. The officer will continue to make the same decision on whether or not to remain in the Army. However, with better information, each party can make a more informed decision and possibly decrease dysfunctional interaction resulting from asymmetric information.

The importance of the information exchange becomes more critical, but presumably more accurate, as officers spend time in the Army and as the Army spends more time evaluating the officer.

Future research should incorporate a comparison of needs and rewards over time. Future rewards generally inform current decisions on need fulfillment. More data needs to be collected to facilitate studies that can make comparisons on specific types of employment in the Army. With increased sample sizes, it would be possible to formulate specific hypotheses within each branch of the Army. Furthermore, creation of a comprehensive collection strategy can provide the basis for bridging the gap between senior officers and junior officers. The most effective way to build better information on the rewards of certain career paths is to ask the senior officers who currently occupy those positions to provide their perceived rewards on a common set of dimensions. In effect, the use of N-R fit could provide a higher quality mentorship opportunity for junior, mid-career and senior officers. A collective set of data from the senior officer corps, across each branch and career field, could provide a more efficient and effective mentoring process that may influence a much larger number of junior officers.

Table 1. Means and Standard Deviations of Expert Judge Ratings per Content Dimension, per Item

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Dimension	Item	Statement	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev
Autonomy	1	Working in ways you personally think are best.	**7.71**	**2.98**	1.43	0.79	1.00	0.00	1.43	0.79	3.86	2.41
	2	Making your own decisions.	**9.00**	**0.00**	2.00	1.41	1.00	0.00	2.57	1.99	4.86	2.19
	3	Doing your work in your own way.	**9.00**	**0.00**	1.43	1.13	1.00	0.00	1.57	0.98	4.14	2.27
	4	Determining the way you get the task done.	**9.00**	**0.00**	2.00	1.15	1.00	0.00	1.57	0.98	5.29	2.98
	5	Being able to decide how to get the job done.	**8.86**	**0.38**	1.71	0.95	1.00	0.00	2.57	1.62	5.00	3.56
Challenge	1	Having to solve new problems.	3.14	2.41	**6.43**	**2.82**	1.00	0.00	2.00	1.73	4.14	3.02
	2	Being constantly challenged.	2.00	1.41	**9.00**	**0.00**	1.00	0.00	2.86	1.57	3.00	1.53
	3	Doing assignments that are demanding.	2.29	1.38	**8.57**	**0.79**	1.14	0.38	2.57	1.99	4.43	2.30
	4	Working on tasks that make me push myself.	3.71	2.43	**8.57**	**0.79**	1.00	0.00	3.14	2.19	3.29	1.98
	5	Tackling assignments that are really tough.	2.29	2.56	**8.71**	**0.76**	1.00	0.00	2.71	1.89	4.57	2.76
Compensation/Benefits	1	Strong compensation package.	1.00	0.00	1.00	0.00	**9.00**	**0.00**	3.00	3.21	2.00	1.41
	2	Enough pay to be comfortable.	1.00	0.00	1.00	0.00	**8.57**	**0.79**	1.43	0.79	1.43	0.53
	3	Receiving sufficient money to live well.	1.00	0.00	1.00	0.00	**8.71**	**0.76**	1.86	1.57	1.29	0.49

	4	Total benefits earned are fair.	1.14	0.38	1.00	0.00	**8.86**	**0.38**	1.43	0.79	1.57	1.13
	5	The opportunity to become financially wealthy.	1.00	0.00	1.29	0.76	**8.29**	**1.50**	2.00	2.24	1.14	0.38
Developmental Potential	1	Senior officers consider your work valuable.	1.43	0.79	1.29	0.49	1.71	1.25	**7.00**	**2.52**	2.71	1.80
	2	Knowing that good work will be rewarded.	1.57	0.98	1.14	0.38	2.86	2.34	**6.57**	**2.57**	2.57	2.07
	3	Being recognized when you do a good job.	1.57	1.51	1.14	0.38	1.86	1.46	**7.86**	**1.95**	2.57	1.27
	4	Senior leaders recognize when I do my job well.	1.43	0.79	1.14	0.38	1.14	0.38	**7.29**	**2.36**	3.14	2.04
	5	Receiving opportunities based on my performance.	1.29	0.76	2.00	1.53	2.29	2.63	**8.71**	**0.76**	1.29	0.49
Leadership Opportunity	1	Using my leadership abilities.	3.43	2.30	2.57	1.62	1.00	0.00	2.57	1.81	**8.00**	**1.53**
	2	Setting out the best way for my team to do its job.	5.57	2.44	2.43	1.81	1.00	0.00	2.14	1.86	**8.29**	**1.11**
	3	Having teammates look to me for direction.	1.57	1.51	1.86	1.57	1.00	0.00	3.57	2.94	**7.86**	**1.46**
	4	Being responsible for the effort of others.	1.43	0.79	1.29	0.76	1.00	0.00	1.29	0.76	**8.29**	**0.76**
	5	Leading the way for my team.	1.57	1.13	1.57	1.51	1.14	0.38	2.57	2.23	**9.00**	**0.00**

Meaningful Purpose	1	Doing good for other people.	1.14	0.38	1.00	0.00	1.00	0.00	1.14	0.38	3.57	3.10
	2	Giving help to those in need.	1.14	0.38	1.14	0.38	1.00	0.00	1.14	0.38	3.29	2.06
	3	Making important contributions on behalf of your community.	1.86	1.57	1.29	0.76	1.43	1.13	1.43	0.79	3.71	2.81
	4	Being of service to society.	1.57	1.51	1.29	0.76	1.14	0.38	1.29	0.49	3.57	2.64
	5	Protecting the well-being of others.	1.00	0.00	1.14	0.38	1.00	0.00	1.29	0.49	4.57	2.44
Senior Leadership	1	Having senior leaders who inspire you.	1.29	0.76	1.29	0.49	1.00	0.00	1.57	0.79	3.00	3.00
	2	Working for officers who make reasonable requests.	1.71	1.11	1.00	0.00	1.14	0.38	1.71	0.95	3.43	2.37
	3	Commanders who make excellent decisions.	1.14	0.38	1.00	0.00	1.00	0.00	1.14	0.38	4.14	3.13
	4	Leaders who excel at training the team.	1.14	0.38	1.00	0.00	1.00	0.00	1.86	1.86	5.86	3.29
	5	Senior officers who foster a positive climate among junior officers.	1.00	0.00	1.00	0.00	1.00	0.00	2.14	1.46	3.29	2.87
Teammates	1	Forming friendships with your team.	1.00	0.00	1.14	0.38	1.00	0.00	1.00	0.00	2.71	1.25
	2	Getting to know your teammates quite well.	1.14	0.38	1.00	0.00	1.00	0.00	1.14	0.38	4.29	2.69

	3	Working with a spirit of cooperation.	1.57	1.51	1.43	0.79	1.14	0.38	1.14	0.38	3.86	2.54
	4	Developing strong ties with your team members.	1.14	0.38	1.14	0.38	1.00	0.00	1.86	1.46	4.14	2.61
	5	Having a solid sense of camaraderie with your team.	1.00	0.00	1.14	0.38	1.00	0.00	1.57	0.79	3.86	2.73
Variety	1	Experiencing changes in my job.	1.43	0.79	2.71	1.50	1.00	0.00	1.71	1.25	1.86	1.46
	2	Having variety in my assignments.	3.43	3.05	2.00	1.73	1.00	0.00	1.71	0.95	2.14	0.69
	3	Being able to do a wide range of tasks.	3.57	2.44	2.71	2.21	1.00	0.00	1.57	1.13	2.57	2.15
	4	Doing many different things on the job.	3.00	2.24	2.71	2.21	1.00	0.00	1.43	1.13	2.71	1.38
	5	Using the full scope of my capabilities.	3.43	2.70	6.29	2.75	1.14	0.38	3.14	2.19	4.00	2.52
Way of Life	1	Being able to balance work with the rest of my life.	3.00	2.89	1.57	1.13	1.14	0.38	1.14	0.38	2.57	2.44
	2	Keeping work from interfering with my personal life.	2.57	2.44	1.43	1.13	1.57	1.13	1.14	0.38	2.29	2.14
	3	Leading the kind of life you expect.	3.71	2.98	1.00	0.00	3.00	2.58	1.43	0.79	2.43	2.51
	4	Having a fulfilled life outside of work.	1.43	0.79	1.00	0.00	1.57	0.79	1.00	0.00	1.57	0.53

	5	Maintaining strong relationships that go beyond the workplace.	1.14	0.38	1.14	0.38	1.00	0.00	1.86	1.46	2.14	1.77

Table 1 continued

			MPU		**SRL**		**TEM**		**VAR**		**WOL**	
Dimension	Item	Statement	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev	Mean	Sdev
Autonomy	1	Working in ways you personally think are best.	2.00	1.41	1.14	0.38	1.14	0.38	1.29	0.49	2.43	1.99
	2	Making your own decisions.	2.00	1.15	1.14	0.38	1.00	0.00	1.43	1.13	1.14	0.38
	3	Doing your work in your own way.	2.43	1.81	1.29	0.76	1.14	0.38	1.86	1.57	1.86	1.21
	4	Determining the way you get the task done.	1.71	1.11	1.43	1.13	1.00	0.00	1.71	0.95	1.29	0.49
	5	Being able to decide how to get the job done.	1.57	0.98	1.29	0.76	1.00	0.00	1.57	1.51	1.29	0.49
Challenge	1	Having to solve new problems.	1.57	0.79	1.14	0.38	1.00	0.00	4.14	3.13	1.00	0.00
	2	Being constantly challenged.	2.00	1.41	1.71	1.25	1.14	0.38	3.57	1.27	1.29	0.49
	3	Doing assignments that are demanding.	2.00	1.15	1.29	0.76	1.00	0.00	3.14	1.77	1.00	0.00
	4	Working on tasks that make me push myself.	2.57	2.15	1.29	0.76	1.14	0.38	3.14	2.19	1.43	0.53
	5	Tackling assignments that are really tough.	1.57	0.79	1.29	0.76	1.00	0.00	2.00	1.00	1.00	0.00

Compensation/Benefits	1	Strong compensation package.	1.14	0.38	1.57	0.98	1.00	0.00	1.00	0.00	1.57	0.98
	2	Enough pay to be comfortable.	1.29	0.49	1.43	0.79	1.00	0.00	1.00	0.00	2.57	1.13
	3	Receiving sufficient money to live well.	1.14	0.38	1.43	0.79	1.00	0.00	1.00	0.00	3.14	1.86
	4	Total benefits earned are fair.	1.00	0.00	1.29	0.76	1.00	0.00	1.00	0.00	1.86	1.07
	5	The opportunity to become financially wealthy.	1.43	0.79	1.29	0.76	1.00	0.00	1.00	0.00	2.29	1.25
Developmental Potential	1	Senior officers consider your work valuable.	2.00	1.53	7.14	2.73	1.86	2.27	1.14	0.38	1.00	0.00
	2	Knowing that good work will be rewarded.	1.57	0.79	3.00	1.91	1.00	0.00	1.00	0.00	1.29	0.49
	3	Being recognized when you do a good job.	1.71	1.25	4.71	1.98	1.00	0.00	1.00	0.00	1.14	0.38
	4	Senior leaders recognize when I do my job well.	1.43	1.13	6.71	2.36	1.57	1.13	1.00	0.00	1.14	0.38
	5	Receiving opportunities based on my performance.	1.43	0.79	3.29	2.21	1.00	0.00	1.29	0.76	1.14	0.38
Leadership Opportunity	1	Using my leadership abilities.	2.43	1.13	1.71	1.25	1.29	0.49	1.14	0.38	1.14	0.38
	2	Setting out the best way for my team to do its job.	2.14	1.35	1.29	0.76	2.57	2.15	1.14	0.38	1.00	0.00
	3	Having teammates look to me for direction.	2.14	1.68	1.00	0.00	6.86	2.34	1.14	0.38	1.00	0.00

	4	Being responsible for the effort of others.	2.14	2.19	1.14	0.38	2.71	1.80	1.14	0.38	1.29	0.76
	5	Leading the way for my team.	1.86	1.21	1.14	0.38	3.57	2.57	1.14	0.38	1.14	0.38
Meaningful Purpose	1	Doing good for other people.	**8.57**	**0.79**	1.00	0.00	1.71	1.25	1.00	0.00	1.86	1.57
	2	Giving help to those in need.	**8.43**	**1.13**	1.00	0.00	2.29	1.98	1.00	0.00	1.71	0.95
	3	Making important contributions on behalf of your community.	**8.86**	**0.38**	1.14	0.38	2.00	1.53	1.00	0.00	2.29	1.70
	4	Being of service to society.	**8.71**	**0.76**	1.29	0.76	1.86	1.46	1.14	0.38	2.00	1.53
	5	Protecting the well-being of others.	**8.86**	**0.38**	1.86	1.86	3.00	2.24	1.00	0.00	2.43	1.40
Senior Leadership	1	Having senior leaders who inspire you.	2.00	1.41	**8.71**	**0.49**	2.00	1.73	1.14	0.38	1.14	0.38
	2	Working for officers who make reasonable requests.	1.29	0.49	**6.57**	**2.94**	2.29	1.38	1.00	0.00	1.71	1.89
	3	Commanders who make excellent decisions.	1.71	1.50	**6.71**	**1.70**	1.43	0.53	1.00	0.00	1.14	0.38
	4	Leaders who excel at training the team.	1.57	1.13	**6.14**	**1.68**	2.14	1.57	1.00	0.00	1.14	0.38
	5	Senior officers who foster a positive climate among junior officers.	1.71	1.50	**7.43**	**2.94**	3.29	1.80	1.00	0.00	1.29	0.76
Teammates	1	Forming friendships with your team.	3.43	1.51	1.57	1.51	**8.29**	**1.11**	1.14	0.38	1.14	0.38

	2	Getting to know your teammates quite well.	3.14	1.46	1.14	0.38	**8.57**	**0.79**	1.43	0.79	1.43	0.79
	3	Working with a spirit of cooperation.	2.57	1.62	1.57	0.79	**6.57**	**2.82**	1.14	0.38	1.14	0.38
	4	Developing strong ties with your team members.	2.71	1.70	1.57	0.98	**9.00**	**0.00**	1.14	0.38	1.43	1.13
	5	Having a solid sense of camaraderie with your team.	3.43	2.70	1.43	0.79	**8.00**	**1.73**	1.00	0.00	1.86	1.46
Variety	1	Experiencing changes in my job.	1.14	0.38	1.00	0.00	1.00	0.00	**8.00**	**1.29**	1.00	0.00
	2	Having variety in my assignments.	1.71	0.95	1.14	0.38	1.00	0.00	**9.00**	**0.00**	1.29	0.49
	3	Being able to do a wide range of tasks.	1.71	0.95	1.29	0.76	1.00	0.00	**9.00**	**0.00**	1.00	0.00
	4	Doing many different things on the job.	1.57	1.13	1.14	0.38	1.00	0.00	**9.00**	**0.00**	1.00	0.00
	5	Using the full scope of my capabilities.	1.86	1.21	1.14	0.38	1.14	0.38	**4.71**	**2.63**	1.29	0.49
Way of Life	1	Being able to balance work with the rest of my life.	1.57	0.79	1.29	0.76	1.00	0.00	1.86	1.57	**8.86**	**0.38**
	2	Keeping work from interfering with my personal life.	1.29	0.49	1.29	0.76	1.00	0.00	1.14	0.38	**8.86**	**0.38**
	3	Leading the kind of life you expect.	3.57	1.81	1.14	0.38	1.29	0.49	1.57	1.13	**7.43**	**1.90**
	4	Having a fulfilled life outside of	2.86	2.48	1.14	0.38	1.14	0.38	1.29	0.49	**8.86**	**0.38**

	work.										
5	Maintaining strong relationships that go beyond the workplace.	3.86	2.97	1.14	0.38	6.71	2.36	1.00	0.00	**4.00**	**2.83**

Note: Raw data from expert rating results. Expert judges were given the definition of each content dimension and tasked to rate how well it corresponded with the definition on a 9-point scale ranging from *Not at All* to *Extremely Well*. Content Dimensions: AUT-Autonomy, CHA-Challenge, COM-Compensation/Benefits, DEV-Developmental Potential, LOP-Leadership Opportunity, MPU-Meaningful Purpose, SRL-Senior Leadership, TEM-Teammates, VAR-Variety, WOL-Way of Life.

Table 2. Preliminary Check on Correspondence of Each Item with its Associated Content Dimension Using Expert Judge Ratings.

			(MEAN - 1)/8									
Dimension	Item	Statement	AUT	CHA	COM	DEV	LOP	MPU	SRL	TEM	VAR	WOL
Autonomy	1	Working in ways you personally think are best.	**0.84**	0.05	0.00	0.05	0.36	0.13	0.02	0.02	0.04	0.18
	2	Making your own decisions.	**1.00**	0.13	0.00	0.20	0.48	0.13	0.02	0.00	0.05	0.02
	3	Doing your work in your own way.	**1.00**	0.05	0.00	0.07	0.39	0.18	0.04	0.02	0.11	0.11
	4	Determining the way you get the task done.	**1.00**	0.13	0.00	0.07	0.54	0.09	0.05	0.00	0.09	0.04
	5	Being able to decide how to get the job done.	**0.98**	0.09	0.00	0.20	0.50	0.07	0.04	0.00	0.07	0.04
Challenge	1	Having to solve new problems.	0.27	**0.68**	0.00	0.13	0.39	0.07	0.02	0.00	0.39	0.00
	2	Being constantly challenged.	0.13	**1.00**	0.00	0.23	0.25	0.13	0.09	0.02	0.32	0.04
	3	Doing assignments that are demanding.	0.16	**0.95**	0.02	0.20	0.43	0.13	0.04	0.00	0.27	0.00
	4	Working on tasks that make me push myself.	0.34	**0.95**	0.00	0.27	0.29	0.20	0.04	0.02	0.27	0.05
	5	Tackling assignments that are really tough.	0.16	**0.96**	0.00	0.21	0.45	0.07	0.04	0.00	0.13	0.00
Compensation/ Benefits	1	Strong compensation package.	0.00	0.00	**1.00**	0.25	0.13	0.02	0.07	0.00	0.00	0.07
	2	Enough pay to be comfortable.	0.00	0.00	**0.95**	0.05	0.05	0.04	0.05	0.00	0.00	0.20
	3	Receiving sufficient money to live well.	0.00	0.00	**0.96**	0.11	0.04	0.02	0.05	0.00	0.00	0.27
	4	Total benefits earned are fair.	0.02	0.00	**0.98**	0.05	0.07	0.00	0.04	0.00	0.00	0.11
	5	The opportunity to become financially wealthy.	0.00	0.04	**0.91**	0.13	0.02	0.05	0.04	0.00	0.00	0.16
Developmental Potential	1	Senior officers consider your work valuable.	0.05	0.04	0.09	**0.75**	0.21	0.13	0.77	0.11	0.02	0.00
	2	Knowing that good work will be rewarded.	0.07	0.02	0.23	**0.70**	0.20	0.07	0.25	0.00	0.00	0.04
	3	Being recognized when you do a good job.	0.07	0.02	0.11	**0.86**	0.20	0.09	0.46	0.00	0.00	0.02
	4	Senior leaders recognize when I do my job well.	0.05	0.02	0.02	**0.79**	0.27	0.05	0.71	0.07	0.00	0.02

	5	Receiving opportunities based on my performance.	0.04	0.13	0.16	**0.96**	0.04	0.05	0.29	0.00	0.04	0.02
Leadership Opportunity	1	Using my leadership abilities.	0.30	0.20	0.00	0.20	**0.88**	0.18	0.09	0.04	0.02	0.02
	2	Setting out the best way for my team to do its job.	0.57	0.18	0.00	0.14	**0.91**	0.14	0.04	0.20	0.02	0.00
	3	Having teammates look to me for direction.	0.07	0.11	0.00	0.32	**0.86**	0.14	0.00	0.73	0.02	0.00
	4	Being responsible for the effort of others.	0.05	0.04	0.00	0.04	**0.91**	0.14	0.02	0.21	0.02	0.04
	5	Leading the way for my team.	0.07	0.07	0.02	0.20	**1.00**	0.11	0.02	0.32	0.02	0.02
Meaningful Purpose	1	Doing good for other people.	0.02	0.00	0.00	0.02	0.32	**0.95**	0.00	0.09	0.00	0.11
	2	Giving help to those in need.	0.02	0.02	0.00	0.02	0.29	**0.93**	0.00	0.16	0.00	0.09
	3	Making important contributions on behalf of your community.	0.11	0.04	0.05	0.05	0.34	**0.98**	0.02	0.13	0.00	0.16
	4	Being of service to society.	0.07	0.04	0.02	0.04	0.32	**0.96**	0.04	0.11	0.02	0.13
	5	Protecting the well-being of others.	0.00	0.02	0.00	0.04	0.45	**0.98**	0.11	0.25	0.00	0.18
Senior Leadership	1	Having senior leaders who inspire you.	0.04	0.04	0.00	0.07	0.25	0.13	**0.96**	0.13	0.02	0.02
	2	Working for officers who make reasonable requests.	0.09	0.00	0.02	0.09	0.30	0.04	**0.70**	0.16	0.00	0.09
	3	Commanders who make excellent decisions.	0.02	0.00	0.00	0.02	0.39	0.09	**0.71**	0.05	0.00	0.02
	4	Leaders who excel at training the team.	0.02	0.00	0.00	0.11	0.61	0.07	**0.64**	0.14	0.00	0.02
	5	Senior officers who foster a positive climate among junior officers.	0.00	0.00	0.00	0.14	0.29	0.09	**0.80**	0.29	0.00	0.04
Teammates	1	Forming friendships with your team.	0.00	0.02	0.00	0.00	0.21	0.30	0.07	**0.91**	0.02	0.02
	2	Getting to know your teammates quite well.	0.02	0.00	0.00	0.02	0.41	0.27	0.02	**0.95**	0.05	0.05
	3	Working with a spirit of cooperation.	0.07	0.05	0.02	0.02	0.36	0.20	0.07	**0.70**	0.02	0.02
	4	Developing strong ties with your team members.	0.02	0.02	0.00	0.11	0.39	0.21	0.07	**1.00**	0.02	0.05
	5	Having a solid sense of camaraderie with your team.	0.00	0.02	0.00	0.07	0.36	0.30	0.05	**0.88**	0.00	0.11
Variety	1	Experiencing changes in my job.	0.05	0.21	0.00	0.09	0.11	0.02	0.00	0.00	**0.88**	0.00
	2	Having variety in my assignments.	0.30	0.13	0.00	0.09	0.14	0.09	0.02	0.00	**1.00**	0.04
	3	Being able to do a wide range of tasks.	0.32	0.21	0.00	0.07	0.20	0.09	0.04	0.00	**1.00**	0.00

	4	Doing many different things on the job.	0.25	0.21	0.00	0.05	0.21	0.07	0.02	0.00	**1.00**	0.00
	5	Using the full scope of my capabilities.	0.30	0.66	0.02	0.27	0.38	0.11	0.02	0.02	**0.46**	0.04
Way of Life	1	Being able to balance work with the rest of my life.	0.25	0.07	0.02	0.02	0.20	0.07	0.04	0.00	0.11	**0.98**
	2	Keeping work from interfering with my personal life.	0.20	0.05	0.07	0.02	0.16	0.04	0.04	0.00	0.02	**0.98**
	3	Leading the kind of life you expect.	0.34	0.00	0.25	0.05	0.18	0.32	0.02	0.04	0.07	**0.80**
	4	Having a fulfilled life outside of work.	0.05	0.00	0.07	0.00	0.07	0.23	0.02	0.02	0.04	**0.98**
	5	Maintaining strong relationships that go beyond the workplace.	0.02	0.02	0.00	0.11	0.14	0.36	0.02	0.71	0.00	**0.38**

Note: The data in the chart are a result of subtracting one from the mean and then dividing by 8. Since there are nine answers in the rating scale, the simple math allows for easy analysis where all ratings are expressed in values between 0 -1. This cursory look also illustrates any items that are being interpreted by the judges as indicative of another, unintended content dimension. Content Dimensions: AUT-Autonomy, CHA-Challenge, COM-Compensation/Benefits, DEV-Developmental Potential, LOP-Leadership Opportunity, MPU-Meaningful Purpose, SRL-Senior Leadership, TEM-Teammates, VAR-Variety, WOL-Way of Life.

Table 3. Details by Item for Rewards (5-Item Survey) - Cadet Pretest

	AUTR	CHAR	COMR	INSR	LOPR	MPUR	ROPR	TEMR	VARR	WOLR
AUTR1	**0.620**	-0.051	-0.064	-0.076	-0.041	-0.002	-0.063	-0.038	-0.077	-0.035
AUTR2	**0.800**	-0.020	0.053	0.048	0.064	0.075	0.045	0.035	0.026	0.109
AUTR3	**0.862**	-0.022	-0.008	-0.061	-0.055	0.005	-0.076	-0.016	-0.022	0.016
AUTR4	**0.865**	0.064	-0.005	0.006	0.043	0.009	-0.017	-0.006	0.042	0.005
AUTR5	**0.878**	-0.008	-0.002	0.044	-0.019	-0.066	0.079	0.010	-0.010	-0.084
CHAR1	0.027	**0.773**	-0.023	-0.016	-0.041	-0.001	-0.030	-0.031	0.025	0.011
CHAR2	-0.072	**0.835**	-0.032	-0.019	-0.017	-0.060	-0.069	0.011	-0.170	-0.070
CHAR3	-0.009	**0.848**	-0.019	-0.032	0.021	0.038	0.019	-0.015	0.013	-0.004
CHAR4	0.032	**0.879**	0.031	0.084	0.068	0.044	0.053	0.059	0.043	0.061
CHAR5	0.016	**0.893**	0.023	-0.029	-0.044	-0.026	0.003	-0.034	0.064	-0.008
COMR1	0.021	0.220	**0.671**	0.089	0.077	0.100	0.107	0.064	0.167	-0.042
COMR2	-0.088	-0.060	**0.867**	-0.066	-0.042	-0.088	-0.108	-0.039	-0.099	-0.076
COMR3	-0.015	-0.133	**0.877**	-0.093	-0.091	-0.051	-0.134	-0.099	-0.113	0.037
COMR4	0.106	0.105	**0.676**	0.172	0.126	0.099	0.243	0.176	0.156	0.060
COMR5	0.081	0.074	**0.654**	0.064	0.069	0.083	0.129	0.044	0.105	0.060
INSR1	-0.078	0.029	-0.006	**0.745**	-0.062	-0.067	-0.033	-0.069	-0.019	-0.075
INSR2	0.050	0.009	-0.011	**0.804**	-0.029	0.029	-0.002	-0.108	0.017	-0.002
INSR3	0.027	-0.032	-0.007	**0.857**	0.045	0.074	0.012	0.032	-0.007	0.079
INSR4	-0.088	0.106	0.022	**0.795**	0.062	-0.038	0.036	0.120	0.071	-0.107
INSR5	0.063	-0.093	0.002	**0.811**	-0.036	-0.027	-0.020	0.008	-0.060	0.065
LOPR1	0.025	0.079	0.040	0.035	**0.804**	0.140	-0.066	0.060	0.085	0.027
LOPR2	-0.184	-0.008	-0.029	-0.143	**0.755**	-0.344	-0.119	-0.044	-0.189	-0.170
LOPR3	0.111	-0.072	0.002	-0.008	**0.800**	0.123	0.118	-0.155	0.046	0.096
LOPR4	-0.021	-0.006	-0.043	0.013	**0.746**	-0.067	-0.034	-0.010	-0.040	-0.035
LOPR5	0.031	0.003	0.013	0.071	**0.847**	0.074	0.067	0.119	0.053	0.041
MPUR1	0.055	-0.133	-0.058	-0.022	0.035	**0.782**	-0.038	0.038	-0.120	0.067
MPUR2	-0.034	-0.038	-0.039	-0.057	0.021	**0.827**	-0.083	-0.055	-0.026	-0.031

MPUR3	-0.009	0.098	0.024	-0.013	-0.167	**0.784**	0.087	-0.099	0.064	-0.052
MPUR4	-0.020	0.041	0.059	0.014	-0.194	**0.822**	0.022	0.013	0.031	-0.002
MPUR5	0.018	0.034	0.012	0.092	0.347	**0.766**	0.023	0.119	0.053	0.026
ROPR1	0.214	-0.051	-0.061	0.115	0.117	0.289	**0.616**	0.054	0.076	0.211
ROPR2	0.092	0.156	-0.036	0.107	0.246	0.245	**0.730**	0.066	0.244	0.034
ROPR3	-0.086	-0.206	0.029	-0.273	-0.235	-0.192	**0.747**	-0.141	-0.291	-0.039
ROPR4	-0.061	-0.191	0.007	-0.171	-0.285	-0.253	**0.778**	-0.113	-0.216	-0.044
ROPR5	-0.083	0.303	0.040	0.280	0.226	0.032	**0.743**	0.165	0.241	-0.089
TEMR1	-0.062	0.002	-0.010	-0.121	-0.141	-0.068	-0.063	**0.618**	-0.032	-0.041
TEMR2	-0.056	0.043	0.019	-0.057	0.088	-0.020	-0.039	**0.814**	0.000	-0.055
TEMR3	0.122	-0.017	0.064	0.139	0.103	0.172	0.132	**0.784**	0.076	0.158
TEMR4	-0.021	0.010	-0.047	-0.006	-0.077	-0.076	-0.034	**0.876**	0.009	-0.028
TEMR5	0.005	-0.032	-0.006	0.000	-0.010	-0.001	-0.002	**0.872**	-0.050	-0.021
VARR1	-0.011	-0.051	0.026	-0.054	0.043	0.118	-0.020	-0.040	**0.589**	0.055
VARR2	0.067	-0.003	-0.013	-0.004	-0.057	-0.001	-0.021	-0.107	**0.779**	0.035
VARR3	-0.014	0.042	-0.029	0.072	0.136	0.138	-0.003	0.158	**0.832**	0.062
VARR4	0.042	-0.072	-0.031	-0.028	-0.001	-0.010	0.026	0.015	**0.842**	-0.026
VARR5	-0.077	0.056	0.059	-0.016	-0.103	-0.172	0.002	-0.066	**0.841**	-0.083
WOLR1	-0.091	-0.066	-0.136	-0.045	-0.058	-0.049	-0.119	-0.034	-0.072	**0.707**
WOLR2	0.019	-0.031	-0.018	-0.056	-0.040	-0.044	-0.024	-0.090	-0.035	**0.684**
WOLR3	-0.028	-0.056	-0.011	-0.082	-0.049	-0.081	-0.043	-0.101	-0.053	**0.791**
WOLR4	0.019	0.052	0.122	0.023	0.010	0.037	0.067	0.018	0.057	**0.825**
WOLR5	0.093	0.105	-0.009	0.193	0.164	0.160	0.113	0.253	0.105	**0.667**

Table 3 continued

	OMEGA	ITEM	PRIMARY	CROSS-LOADINGS	
				ABS AVG	ABS MAX
AUTR1	**0.904**	**AUTR1**	**0.620**	0.050	0.077
AUTR2		**AUTR2**	**0.800**	0.053	0.109
AUTR3		**AUTR3**	**0.862**	0.031	0.076
AUTR4		**AUTR4**	**0.865**	0.022	0.064
AUTR5		**AUTR5**	**0.878**	0.036	0.084
CHAR1	**0.927**	**CHAR1**	**0.773**	0.023	0.041
CHAR2		**CHAR2**	**0.835**	0.058	0.170
CHAR3		**CHAR3**	**0.848**	0.019	0.038
CHAR4		**CHAR4**	**0.879**	0.053	0.084
CHAR5		**CHAR5**	**0.893**	0.027	0.064
COMR1	**0.867**	**COMR1**	**0.671**	0.099	0.220
COMR2		**COMR2**	**0.867**	0.074	0.108
COMR3		**COMR3**	**0.877**	0.085	0.134
COMR4		**COMR4**	**0.676**	0.138	0.243
COMR5		**COMR5**	**0.654**	0.079	0.129
INSR1	**0.901**	**INSR1**	**0.745**	0.049	0.078
INSR2		**INSR2**	**0.804**	0.029	0.108
INSR3		**INSR3**	**0.857**	0.035	0.079
INSR4		**INSR4**	**0.795**	0.072	0.120
INSR5		**INSR5**	**0.811**	0.042	0.093
LOPR1	**0.893**	**LOPR1**	**0.804**	0.062	0.140
LOPR2		**LOPR2**	**0.755**	0.137	0.344
LOPR3		**LOPR3**	**0.800**	0.081	0.155
LOPR4		**LOPR4**	**0.746**	0.030	0.067
LOPR5		**LOPR5**	**0.847**	0.052	0.119
MPUR1	**0.897**	**MPUR1**	**0.782**	0.063	0.133

MPUR2		**MPUR2**	**0.827**	0.043	0.083
MPUR3		**MPUR3**	**0.784**	0.068	0.167
MPUR4		**MPUR4**	**0.822**	0.044	0.194
MPUR5		**MPUR5**	**0.766**	0.080	0.347
ROPR1	**0.846**	**ROPR1**	**0.616**	0.132	0.289
ROPR2		**ROPR2**	**0.730**	0.136	0.246
ROPR3		**ROPR3**	**0.747**	0.166	0.291
ROPR4		**ROPR4**	**0.778**	0.149	0.285
ROPR5		**ROPR5**	**0.743**	0.162	0.303
TEMR1	**0.897**	**TEMR1**	**0.618**	0.060	0.141
TEMR2		**TEMR2**	**0.814**	0.042	0.088
TEMR3		**TEMR3**	**0.784**	0.109	0.172
TEMR4		**TEMR4**	**0.876**	0.034	0.077
TEMR5		**TEMR5**	**0.872**	0.014	0.050
VARR1	**0.886**	**VARR1**	**0.589**	0.046	0.118
VARR2		**VARR2**	**0.779**	0.034	0.107
VARR3		**VARR3**	**0.832**	0.073	0.158
VARR4		**VARR4**	**0.842**	0.028	0.072
VARR5		**VARR5**	**0.841**	0.070	0.172
WOLR1	**0.855**	**WOLR1**	**0.707**	0.074	0.136
WOLR2		**WOLR2**	**0.684**	0.040	0.090
WOLR3		**WOLR3**	**0.791**	0.056	0.101
WOLR4		**WOLR4**	**0.825**	0.045	0.122
WOLR5		**WOLR5**	**0.667**	0.133	0.253

Note: Primary loadings are shown in bold on the diagonal. Cross-loadings that are underlined are significant at the $p < .05$ level. Average and maximum cross-loadings are absolute values.

Table 4. Details by Item for Needs (5-Item Survey) - Cadet Pretest

	AUTN	CHAN	COMN	INSN	LOPN	MPUN	ROPN	TEMN	VARN	WOLN
AUTN1	**0.649**	-0.029	-0.097	-0.077	-0.067	-0.038	-0.015	-0.055	-0.044	-0.114
AUTN2	**0.756**	0.030	0.094	0.087	0.043	0.036	0.011	0.020	0.039	0.071
AUTN3	**0.838**	-0.096	0.089	-0.073	-0.101	0.000	-0.007	-0.059	-0.075	0.055
AUTN4	**0.834**	0.122	-0.085	0.052	0.108	0.007	-0.024	0.059	0.092	-0.038
AUTN5	**0.848**	-0.031	-0.023	-0.003	-0.003	-0.014	0.029	0.013	-0.021	-0.012
CHAN1	-0.008	**0.770**	0.015	-0.074	-0.116	-0.120	-0.041	-0.108	-0.068	-0.046
CHAN2	-0.085	**0.831**	-0.059	-0.014	0.005	-0.029	-0.047	-0.015	-0.110	-0.087
CHAN3	0.039	**0.838**	0.053	0.028	-0.034	0.020	0.117	-0.028	0.056	0.001
CHAN4	0.065	**0.846**	0.044	0.101	0.159	0.107	0.021	0.145	0.015	0.138
CHAN5	-0.019	**0.818**	-0.058	-0.068	-0.049	-0.013	-0.068	-0.027	0.095	-0.028
COMN1	0.014	0.021	**0.703**	-0.019	0.003	0.004	0.116	-0.025	0.011	-0.025
COMN2	-0.037	-0.010	**0.861**	0.012	-0.004	0.015	-0.090	0.006	-0.030	-0.015
COMN3	-0.014	0.002	**0.906**	-0.001	0.000	0.006	-0.066	-0.003	-0.010	0.038
COMN4	0.140	0.107	**0.701**	0.115	0.121	0.104	0.137	0.140	0.132	0.120
COMN5	-0.043	-0.097	**0.743**	-0.101	-0.098	-0.130	0.052	-0.104	-0.053	-0.127
INSN1	-0.003	-0.040	0.049	**0.731**	-0.132	-0.031	0.066	-0.047	-0.039	0.015
INSN2	0.043	0.025	0.014	**0.831**	-0.034	-0.042	0.020	-0.066	0.032	0.020
INSN3	-0.016	-0.018	0.010	**0.865**	0.014	0.081	-0.013	0.027	-0.028	0.042
INSN4	-0.009	0.127	-0.049	**0.792**	0.195	-0.036	0.019	-0.003	0.127	-0.110
INSN5	-0.016	-0.092	-0.018	**0.815**	-0.063	0.001	-0.070	0.074	-0.087	0.016
LOPN1	-0.110	0.069	-0.054	0.001	**0.776**	0.143	-0.069	0.126	-0.108	-0.034
LOPN2	-0.072	0.044	-0.016	-0.145	**0.738**	-0.074	-0.011	-0.091	-0.095	-0.060
LOPN3	0.115	-0.045	0.085	0.089	**0.788**	-0.052	0.057	-0.130	0.070	0.064
LOPN4	0.091	0.145	-0.011	0.036	**0.717**	-0.001	0.052	-0.059	0.207	-0.027
LOPN5	-0.018	-0.158	-0.010	0.004	**0.818**	-0.020	-0.019	0.121	-0.045	0.037
MPUN1	-0.013	-0.053	-0.039	-0.008	-0.027	**0.809**	-0.025	0.018	-0.072	-0.004
MPUN2	-0.028	-0.056	-0.025	-0.077	-0.094	**0.833**	-0.099	-0.112	-0.038	-0.040

MPUN3	0.003	0.041	0.048	-0.059	-0.069	**0.779**	0.049	-0.189	0.062	-0.022
MPUN4	0.005	0.041	0.002	-0.017	-0.006	**0.835**	0.066	-0.021	0.010	-0.029
MPUN5	0.040	0.037	0.025	0.183	0.220	**0.780**	0.019	0.330	0.053	0.111
ROPN1	0.160	0.140	-0.028	0.179	0.159	0.158	**0.633**	0.127	0.192	0.087
ROPN2	0.249	0.368	-0.082	0.331	0.372	0.270	**0.612**	0.250	0.366	0.045
ROPN3	-0.162	-0.176	-0.014	-0.195	-0.205	-0.174	**0.868**	-0.155	-0.212	-0.082
ROPN4	-0.159	-0.176	0.024	-0.188	-0.188	-0.121	**0.865**	-0.127	-0.174	-0.071
ROPN5	0.344	0.346	0.111	0.412	0.414	0.294	**0.547**	0.317	0.346	0.246
TEMN1	0.038	-0.035	0.038	-0.148	-0.095	-0.054	0.089	**0.577**	-0.035	0.037
TEMN2	0.022	0.067	0.038	0.029	0.082	-0.046	0.010	**0.801**	0.055	-0.010
TEMN3	0.038	0.079	-0.002	0.096	0.133	0.112	0.014	**0.808**	0.059	-0.009
TEMN4	0.008	-0.008	-0.005	0.072	-0.007	-0.070	-0.006	**0.848**	0.008	-0.007
TEMN5	-0.068	-0.095	-0.036	-0.114	-0.133	0.031	-0.045	**0.865**	-0.085	0.008
VARN1	0.026	0.066	-0.034	-0.127	-0.046	-0.052	0.011	-0.128	**0.618**	-0.079
VARN2	0.021	-0.012	0.019	-0.022	-0.144	-0.040	-0.011	-0.093	**0.791**	-0.003
VARN3	-0.019	0.224	0.022	0.206	0.240	0.158	-0.004	0.211	**0.799**	0.081
VARN4	0.022	-0.103	-0.018	-0.075	-0.078	-0.050	-0.004	-0.063	**0.815**	-0.045
VARN5	-0.035	-0.130	-0.002	-0.032	0.007	-0.035	0.011	0.013	**0.832**	0.010
WOLN1	-0.001	0.003	-0.025	0.050	0.004	0.004	-0.034	0.012	-0.004	**0.747**
WOLN2	0.041	-0.038	0.111	-0.114	-0.082	-0.104	0.049	-0.136	-0.009	**0.670**
WOLN3	-0.001	-0.093	0.109	-0.130	-0.107	-0.137	0.007	-0.179	-0.077	**0.790**
WOLN4	-0.027	0.020	-0.024	0.001	0.006	0.014	-0.009	0.011	0.019	**0.842**
WOLN5	0.008	0.127	-0.185	0.224	0.210	0.260	0.001	0.343	0.090	**0.691**

Table 4 continued

	OMEGA	ITEM	PRIMARY	CROSS-LOADINGS	
				ABS AVG	ABS MAX
AUTN1	**0.891**	**AUTN1**	**0.649**	0.060	0.114
AUTN2		**AUTN2**	**0.756**	0.048	0.094
AUTN3		**AUTN3**	**0.838**	0.062	0.101
AUTN4		**AUTN4**	**0.834**	0.065	0.122
AUTN5		**AUTN5**	**0.848**	0.017	0.031
CHAN1	**0.912**	**CHAN1**	**0.770**	0.066	0.120
CHAN2		**CHAN2**	**0.831**	0.050	0.110
CHAN3		**CHAN3**	**0.838**	0.042	0.117
CHAN4		**CHAN4**	**0.846**	0.088	0.159
CHAN5		**CHAN5**	**0.818**	0.047	0.095
COMN1	**0.890**	**COMN1**	**0.703**	0.026	0.116
COMN2		**COMN2**	**0.861**	0.024	0.090
COMN3		**COMN3**	**0.906**	0.016	0.066
COMN4		**COMN4**	**0.701**	0.124	0.140
COMN5		**COMN5**	**0.743**	0.089	0.130
INSN1	**0.904**	**INSN1**	**0.731**	0.047	0.132
INSN2		**INSN2**	**0.831**	0.033	0.066
INSN3		**INSN3**	**0.865**	0.028	0.081
INSN4		**INSN4**	**0.792**	0.075	0.195
INSN5		**INSN5**	**0.815**	0.049	0.092
LOPN1	**0.878**	**LOPN1**	**0.776**	0.079	0.143
LOPN2		**LOPN2**	**0.738**	0.068	0.145
LOPN3		**LOPN3**	**0.788**	0.079	0.130
LOPN4		**LOPN4**	**0.717**	0.070	0.207
LOPN5		**LOPN5**	**0.818**	0.048	0.158
MPUN1	**0.904**	**MPUN1**	**0.809**	0.029	0.072

MPUN2		**MPUN2**	**0.833**	0.063	0.112
MPUN3		**MPUN3**	**0.779**	0.060	0.189
MPUN4		**MPUN4**	**0.835**	0.022	0.066
MPUN5		**MPUN5**	**0.780**	0.113	0.330
ROPN1	**0.837**	**ROPN1**	**0.633**	0.137	0.192
ROPN2		**ROPN2**	**0.612**	0.259	0.372
ROPN3		**ROPN3**	**0.868**	0.153	0.212
ROPN4		**ROPN4**	**0.865**	0.136	0.188
ROPN5		**ROPN5**	**0.547**	0.314	0.414
TEMN1	**0.889**	**TEMN1**	**0.577**	0.063	0.148
TEMN2		**TEMN2**	**0.801**	0.040	0.082
TEMN3		**TEMN3**	**0.808**	0.060	0.133
TEMN4		**TEMN4**	**0.848**	0.021	0.072
TEMN5		**TEMN5**	**0.865**	0.068	0.133
VARN1	**0.882**	**VARN1**	**0.618**	0.063	0.128
VARN2		**VARN2**	**0.791**	0.041	0.144
VARN3		**VARN3**	**0.799**	0.129	0.240
VARN4		**VARN4**	**0.815**	0.051	0.103
VARN5		**VARN5**	**0.832**	0.031	0.130
WOLN1	**0.865**	**WOLN1**	**0.747**	0.015	0.050
WOLN2		**WOLN2**	**0.670**	0.076	0.136
WOLN3		**WOLN3**	**0.790**	0.093	0.179
WOLN4		**WOLN4**	**0.842**	0.015	0.027
WOLN5		**WOLN5**	**0.691**	0.161	0.343

Note: Primary loadings are shown in bold on the diagonal. Cross-loadings that are underlined are significant at the $p < .05$ level. Average and maximum cross-loadings are absolute values.

Table 5. Details by Item for Importance (5-Item Survey) - Cadet Pretest

	AUTI	CHAI	COMI	INSI	LOPI	MPUI	ROPI	TEMI	VARI	WOLI
AUTI1	**0.583**	-0.101	0.044	-0.038	-0.067	-0.032	0.070	-0.056	-0.090	0.003
AUTI2	**0.705**	0.036	0.110	0.117	0.112	0.096	0.066	0.103	0.023	0.122
AUTI3	**0.767**	-0.191	0.070	-0.156	-0.249	-0.132	0.051	-0.193	-0.158	-0.031
AUTI4	**0.816**	0.190	-0.101	0.083	0.152	0.043	-0.096	0.069	0.143	-0.050
AUTI5	**0.848**	-0.003	-0.049	-0.012	0.012	0.016	-0.024	0.045	0.018	-0.008
CHAI1	0.043	**0.745**	0.030	0.003	-0.101	0.030	-0.014	-0.060	-0.011	0.047
CHAI2	-0.099	**0.844**	-0.051	0.028	0.004	-0.012	-0.066	0.052	-0.071	-0.019
CHAI3	0.037	**0.816**	-0.003	-0.091	-0.021	-0.018	0.074	-0.068	-0.042	-0.052
CHAI4	0.012	**0.833**	0.027	0.138	0.184	0.107	-0.016	0.139	0.017	0.074
CHAI5	0.022	**0.882**	0.007	-0.069	-0.080	-0.079	0.021	-0.071	0.085	-0.030
COMI1	0.060	0.082	**0.662**	0.043	0.070	0.041	0.048	0.035	0.077	0.082
COMI2	-0.047	-0.020	**0.883**	0.012	-0.005	0.006	-0.094	0.013	-0.050	-0.091
COMI3	-0.056	-0.040	**0.911**	-0.049	-0.050	-0.043	-0.044	-0.045	-0.047	-0.064
COMI4	0.125	0.092	**0.758**	0.115	0.115	0.124	0.145	0.099	0.134	0.188
COMI5	0.027	-0.038	**0.738**	-0.075	-0.060	-0.084	0.071	-0.064	-0.006	0.028
INSI1	0.008	-0.022	-0.014	**0.753**	-0.002	-0.030	0.022	-0.047	-0.010	-0.024
INSI2	0.001	0.036	0.003	**0.808**	-0.066	0.027	-0.011	-0.075	-0.037	0.015
INSI3	-0.077	-0.052	0.008	**0.881**	-0.097	0.007	-0.016	-0.026	-0.080	0.007
INSI4	0.101	0.116	-0.034	**0.756**	0.249	0.013	0.012	0.115	0.182	-0.037
INSI5	0.015	-0.044	0.025	**0.803**	-0.014	-0.024	0.004	0.053	0.003	0.026
LOPI1	-0.237	-0.034	-0.100	0.111	**0.705**	0.219	-0.196	0.174	-0.174	-0.059
LOPI2	-0.020	0.093	-0.003	-0.133	**0.736**	-0.110	0.016	-0.121	0.007	-0.068
LOPI3	0.192	-0.034	0.116	0.055	**0.723**	-0.069	0.192	-0.055	0.076	0.151
LOPI4	0.156	0.151	0.006	-0.090	**0.730**	-0.033	0.063	-0.155	0.135	0.003
LOPI5	-0.077	-0.137	-0.017	0.052	**0.828**	0.007	-0.063	0.129	-0.041	-0.019
MPUI1	-0.074	-0.023	-0.040	-0.031	-0.013	**0.771**	-0.065	0.001	-0.054	-0.063
MPUI2	-0.054	-0.106	0.000	-0.070	-0.114	**0.828**	-0.038	-0.086	-0.059	0.003

MPUI3	0.118	0.137	0.025	0.034	0.077	**0.744**	0.106	-0.068	0.123	0.053
MPUI4	-0.014	-0.016	-0.016	-0.074	-0.090	**0.820**	0.005	-0.111	-0.021	-0.056
MPUI5	0.055	0.051	0.039	0.187	0.201	**0.749**	0.010	0.317	0.043	0.084
ROPI1	0.234	0.241	0.066	0.351	0.300	0.239	**0.471**	0.252	0.256	0.195
ROPI2	0.280	0.414	0.031	0.433	**0.473**	0.314	**0.457**	0.321	0.355	0.151
ROPI3	-0.157	-0.174	0.007	-0.196	-0.218	-0.150	**0.850**	-0.145	-0.168	-0.057
ROPI4	-0.138	-0.139	-0.068	-0.192	-0.165	-0.105	**0.875**	-0.138	-0.150	-0.121
ROPI5	0.282	0.307	0.064	0.385	0.380	0.246	**0.531**	0.298	0.323	0.158
TEMI1	0.046	-0.060	0.075	-0.156	-0.124	-0.100	0.107	**0.567**	-0.004	0.036
TEMI2	-0.059	0.025	-0.050	-0.056	0.016	-0.024	-0.039	**0.827**	-0.022	-0.054
TEMI3	0.049	0.066	0.043	0.262	0.123	0.159	0.043	**0.771**	0.052	0.034
TEMI4	0.005	-0.013	-0.030	-0.093	-0.003	-0.067	-0.027	**0.884**	-0.004	-0.011
TEMI5	-0.004	-0.036	0.025	0.020	-0.059	0.018	-0.002	**0.839**	-0.011	0.026
VARI1	0.064	-0.015	0.013	-0.079	-0.069	-0.060	0.030	-0.106	**0.599**	-0.039
VARI2	0.056	-0.151	0.115	0.094	-0.040	0.015	0.061	-0.002	**0.732**	0.135
VARI3	-0.031	0.249	-0.019	0.234	0.245	0.171	-0.057	0.257	**0.735**	0.090
VARI4	-0.035	-0.028	-0.031	-0.077	-0.041	-0.025	-0.032	-0.053	**0.838**	-0.036
VARI5	-0.011	-0.036	-0.035	-0.105	-0.068	-0.069	0.014	-0.069	**0.871**	-0.090
WOLI1	-0.069	0.009	-0.136	0.132	0.029	0.062	-0.121	0.064	-0.016	**0.669**
WOLI2	0.051	-0.102	0.158	-0.174	-0.145	-0.179	0.036	-0.201	-0.072	**0.641**
WOLI3	0.020	-0.075	0.182	-0.111	-0.083	-0.137	0.083	-0.134	-0.051	**0.778**
WOLI4	0.016	0.042	-0.003	-0.019	0.020	0.020	0.067	-0.019	0.029	**0.809**
WOLI5	-0.029	0.126	-0.249	0.212	0.190	0.265	-0.125	0.337	0.109	**0.667**

Table 5 continued

	OMEGA	ITEM	PRIMARY	CROSS-LOADINGS	
				ABS AVG	ABS MAX
AUTI1	**0.863**	**AUTI1**	**0.583**	0.056	0.101
AUTI2		**AUTI2**	**0.705**	0.087	0.122
AUTI3		**AUTI3**	**0.767**	0.137	0.249
AUTI4		**AUTI4**	**0.816**	0.103	0.190
AUTI5		**AUTI5**	**0.848**	0.021	0.049
CHAI1	**0.914**	**CHAI1**	**0.745**	0.038	0.101
CHAI2		**CHAI2**	**0.844**	0.045	0.099
CHAI3		**CHAI3**	**0.816**	0.045	0.091
CHAI4		**CHAI4**	**0.833**	0.079	0.184
CHAI5		**CHAI5**	**0.882**	0.052	0.085
COMI1	**0.895**	**COMI1**	**0.662**	0.060	0.082
COMI2		**COMI2**	**0.883**	0.038	0.094
COMI3		**COMI3**	**0.911**	0.049	0.064
COMI4		**COMI4**	**0.758**	0.126	0.188
COMI5		**COMI5**	**0.738**	0.050	0.084
INSI1	**0.900**	**INSI1**	**0.753**	0.020	0.047
INSI2		**INSI2**	**0.808**	0.030	0.075
INSI3		**INSI3**	**0.881**	0.041	0.097
INSI4		**INSI4**	**0.756**	0.095	0.249
INSI5		**INSI5**	**0.803**	0.023	0.053
LOPI1	**0.862**	**LOPI1**	**0.705**	0.145	0.237
LOPI2		**LOPI2**	**0.736**	0.063	0.133
LOPI3		**LOPI3**	**0.723**	0.104	0.192
LOPI4		**LOPI4**	**0.730**	0.088	0.156
LOPI5		**LOPI5**	**0.828**	0.060	0.137
MPUI1	**0.888**	**MPUI1**	**0.771**	0.040	0.074

MPUI2		**MPUI2**	**0.828**	0.059	0.114
MPUI3		**MPUI3**	**0.744**	0.082	0.137
MPUI4		**MPUI4**	**0.820**	0.045	0.111
MPUI5		**MPUI5**	**0.749**	0.110	0.317
ROPI1	**0.784**	**ROPI1**	**0.471**	0.237	0.351
ROPI2		**ROPI2**	**0.457**	0.308	0.473
ROPI3		**ROPI3**	**0.850**	0.141	0.218
ROPI4		**ROPI4**	**0.875**	0.135	0.192
ROPI5		**ROPI5**	**0.531**	0.271	0.385
TEMI1	**0.888**	**TEMI1**	**0.567**	0.079	0.156
TEMI2		**TEMI2**	**0.827**	0.038	0.059
TEMI3		**TEMI3**	**0.771**	0.092	0.262
TEMI4		**TEMI4**	**0.884**	0.028	0.093
TEMI5		**TEMI5**	**0.839**	0.022	0.059
VARI1	**0.871**	**VARI1**	**0.599**	0.053	0.106
VARI2		**VARI2**	**0.732**	0.074	0.151
VARI3		**VARI3**	**0.735**	0.150	0.257
VARI4		**VARI4**	**0.838**	0.040	0.077
VARI5		**VARI5**	**0.871**	0.055	0.105
WOLI1	**0.839**	**WOLI1**	**0.669**	0.071	0.136
WOLI2		**WOLI2**	**0.641**	0.124	0.201
WOLI3		**WOLI3**	**0.778**	0.097	0.182
WOLI4		**WOLI4**	**0.809**	0.026	0.067
WOLI5		**WOLI5**	**0.667**	0.182	0.337

Note: Primary loadings are shown in bold on the diagonal. Cross-loadings that are underlined are significant at the $p < .05$ level. Average and maximum cross-loadings are absolute values. There is one instance where a cross-loading is greater than the primary loading. Item ROPI2 is expected to identify Recognition of Potential, however it is loading on Leadership Opportunity with a higher magnitude. In ROPI2, the absolute max cross-loading is .473 and the primary loading is .457.

Table 6. Revision of Needs-Rewards Survey from 5-Item to 4-Item to 3-Item.

5-ITEM Averages						Results from DROP			4-ITEM Averages				
	PRI	CROSS LDGs				PRI	CROSS LDGs			PRI	CROSS LDGs		
AVG OMEGA	PRI LDG	ABS AVG	ABS MAX	5 ITEMS	5-->4	AVG PRI	AVG of AVG	AVG MAX	AVG OMEGA	PRI LDG	ABS AVG	ABS MAX	4 ITEMS
0.895	0.635	0.044	0.082	**AUT1**	**DROP**	0.791	0.052	0.101	**0.889**				
	0.767	0.056	0.103	**AUT2**	2					0.749	0.060	0.132	**AUT2**
	0.832	0.075	0.141	**AUT3**	3					0.815	0.082	0.250	**AUT3**
	0.852	0.062	0.124	**AUT4**	4					0.841	0.062	0.178	**AUT4**
	0.870	0.023	0.054	**AUT5**	5					0.863	0.028	0.085	**AUT5**
0.923	0.773	0.042	0.087	**CHA1**	**DROP**	0.840	0.050	0.107	**0.910**				
	0.844	0.054	0.135	**CHA2**	2					0.824	0.053	0.156	**CHA2**
	0.846	0.034	0.079	**CHA3**	3					0.833	0.038	0.108	**CHA3**
	0.862	0.076	0.150	**CHA4**	4					0.857	0.077	0.221	**CHA4**
	0.874	0.044	0.084	**CHA5**	5					0.869	0.052	0.113	**CHA5**
0.889	0.691	0.053	0.123	**COM1**	**DROP**	0.782	0.079	0.139	**0.876**				
	0.862	0.055	0.127	**COM2**	2					0.869	0.034	0.087	**COM2**
	0.893	0.052	0.090	**COM3**	3					0.915	0.048	0.153	**COM3**
	0.730	0.153	0.220	**COM4**	4					0.701	0.146	0.285	**COM4**
	0.734	0.080	0.136	**COM5**	5					0.698	0.081	0.162	**COM5**
0.908	0.753	0.036	0.084	**INS1**	**DROP**	0.815	0.044	0.101	**0.890**				
	0.821	0.026	0.070	**INS2**	2					0.801	0.033	0.114	**INS2**
	0.874	0.038	0.091	**INS3**	3					0.862	0.039	0.108	**INS3**
	0.798	0.085	0.195	**INS4**	4					0.789	0.084	0.269	**INS4**
	0.827	0.035	0.068	**INS5**	5					0.819	0.047	0.112	**INS5**
0.887	0.765	0.110	0.198	**LOP1**	1	0.782	0.085	0.180	**0.853**	0.744	0.106	0.261	**LOP1**

	0.754	0.096	0.223	**LOP2**	**DROP**								
	0.792	0.091	0.169	**LOP3**	3					0.771	0.085	0.212	**LOP3**
	0.760	0.070	0.159	**LOP4**	4					0.728	0.078	0.228	**LOP4**
	0.837	0.057	0.151	**LOP5**	5					0.833	0.053	0.163	**LOP5**
0.903	0.794	0.055	0.106	**MPU1**	1	0.807	0.065	0.169	**0.877**	0.796	0.060	0.139	**MPU1**
	0.837	0.057	0.101	**MPU2**	2					0.820	0.058	0.187	**MPU2**
	0.780	0.080	0.176	**MPU3**	**DROP**								
	0.838	0.036	0.123	**MPU4**	4					0.802	0.054	0.124	**MPU4**
	0.784	0.099	0.337	**MPU5**	5					0.785	0.100	0.327	**MPU5**
0.833	0.601	0.168	0.274	**ROP1**	**DROP**	0.703	0.211	0.325	**0.814**				
	0.626	0.262	0.405	**ROP2**	2					0.595	0.264	0.487	**ROP2**
	0.817	0.183	0.284	**ROP3**	3					0.834	0.127	0.301	**ROP3**
	0.840	0.167	0.261	**ROP4**	4					0.856	0.111	0.296	**ROP4**
	0.632	0.277	0.398	**ROP5**	5					0.594	0.273	0.449	**ROP5**
0.895	0.586	0.069	0.149	**TEM1**	**DROP**	0.790	0.055	0.121	**0.900**				
	0.820	0.038	0.065	**TEM2**	2					0.800	0.037	0.079	**TEM2**
	0.803	0.097	0.212	**TEM3**	3					0.795	0.081	0.269	**TEM3**
	0.877	0.028	0.085	**TEM4**	4					0.866	0.036	0.131	**TEM4**
	0.862	0.041	0.094	**TEM5**	5					0.862	0.042	0.164	**TEM5**
0.890	0.627	0.054	0.116	**VAR1**	**DROP**	0.784	0.064	0.140	**0.884**				
	0.785	0.052	0.142	**VAR2**	2					0.757	0.051	0.150	**VAR2**
	0.802	0.125	0.226	**VAR3**	3					0.793	0.122	0.270	**VAR3**
	0.848	0.039	0.083	**VAR4**	4					0.833	0.044	0.105	**VAR4**
	0.859	0.048	0.134	**VAR5**	5					0.852	0.062	0.171	**VAR5**
0.859	0.714	0.056	0.111	**WOL1**	1	0.741	0.083	0.164	**0.837**	0.691	0.048	0.136	**WOL1**
	0.677	0.084	0.153	**WOL2**	**DROP**								
	0.791	0.082	0.161	**WOL3**	3					0.773	0.106	0.256	**WOL3**
	0.834	0.031	0.071	**WOL4**	4					0.837	0.035	0.122	**WOL4**

	0.686	0.164	0.322	**WOL5**	5				0.693	0.156	0.337	**WOL5**

Table 6 continued

	Results from DROP				**3-ITEM Averages**					**Results from DROP**		
	PRI	**CROSS LDGs**			**PRI**	**CROSS LDGs**				**PRI**	**CROSS LDGs**	
4-->3	AVG PRI	AVG of AVG	AVG MAX	**AVG OMEGA**	**PRI LDG**	**ABS AVG**	**ABS MAX**	**3 ITEMS**	**3 Item**	AVG PRI	AVG of AVG	AVG MAX
	0.817	0.058	0.161	**0.879**						0.841	0.056	0.168
DROP												
3					0.797	0.074	0.212	**AUT3**	3			
4					0.853	0.065	0.202	**AUT4**	4			
5					0.871	0.029	0.091	**AUT5**	5			
	0.846	0.055	0.150	**0.888**						0.852	0.063	0.199
DROP												
3					0.823	0.035	0.112	**CHA3**	3			
4					0.852	0.083	0.283	**CHA4**	4			
5					0.880	0.072	0.203	**CHA5**	5			
	0.796	0.077	0.172	**0.871**						0.828	0.049	0.118
2					0.863	0.025	0.074	**COM2**	2			
3					0.932	0.035	0.103	**COM3**	3			
DROP												
5					0.691	0.087	0.176	**COM5**	5			
	0.818	0.051	0.151	**0.870**						0.830	0.032	0.093
2					0.810	0.031	0.078	**INS2**	2			
3					0.879	0.028	0.071	**INS3**	3			
DROP												

5					0.802	0.038	0.131	**INS5**	5			
1	0.769	0.081	0.216	**0.828**	0.755	0.103	0.252	**LOP1**	1	0.784	0.086	0.243
3					0.763	0.105	0.273	**LOP3**	3			
DROP												
5					0.835	0.049	0.205	**LOP5**	5			
1	0.801	0.068	0.194	**0.857**	0.819	0.047	0.175	**MPU1**	1	0.817	0.055	0.146
2					0.838	0.041	0.096	**MPU2**	2			
4					0.794	0.077	0.168	**MPU4**	4			
DROP												
	0.720	0.194	0.383	**0.816**						0.761	0.152	0.307
2					0.529	0.315	0.499	**ROP2**	2			
3					0.874	0.091	0.223	**ROP3**	3			
4					0.881	0.049	0.198	**ROP4**	4			
DROP												
	0.831	0.049	0.161	**0.885**						0.848	0.031	0.103
2					0.818	0.030	0.079	**TEM2**	2			
DROP												
4					0.870	0.029	0.101	**TEM4**	4			
5					0.856	0.036	0.128	**TEM5**	5			
	0.809	0.070	0.174	**0.861**						0.820	0.044	0.133
2					0.752	0.055	0.158	**VAR2**	2			
DROP												
4					0.841	0.032	0.083	**VAR4**	4			
5					0.868	0.045	0.158	**VAR5**	5			
1	0.748	0.086	0.213	**0.814**	0.675	0.059	0.171	**WOL1**	1	0.769	0.063	0.167

3		0.796	0.074	0.192	**WOL3**	3
4		0.837	0.057	0.137	**WOL4**	4
DROP						

Note: The chart annotates the progression of revisions by item for each content dimension. The initial 5-item model is presented, then refined to the 4-item model, and finally to the 3-item model. Data on the average reliability value (omega) from rewards, needs, and importance is provided for each phase. Also, information on the primary loadings, the absolute average cross loadings, and the absolute maximum cross loadings is provided for each phase.

Table 7. Content Dimensions by Item for 5-Item, 4-Item, and 3-Items

	Dimension		5 - Item Survey (50 Total)
Autonomy	AUTN1	1	Working in ways you personally think are best.
	AUTN2	2	Making your own decisions.
	AUTN3	3	Doing your work in your own way.
	AUTN4	4	Determining the way you get your tasks done.
	AUTN5	5	Being able to decide how to get your job done.
Challenge	CHAN1	6	Having to solve difficult problems.
	CHAN2	7	Being constantly challenged.
	CHAN3	8	Doing assignments that are demanding.
	CHAN4	9	Working on tasks that make you push yourself.
	CHAN5	10	Tackling assignments that are really tough.
Compensation/Benefits	COMN1	11	Strong compensation package.
	COMN2	12	Enough pay to be comfortable.
	COMN3	13	Receiving sufficient money to live well.
	COMN4	14	Total benefits earned are fair.
	COMN5	15	The opportunity to become financially wealthy.
Inspirational Leadership	INSN1	16	Having senior leaders who inspire you.
	INSN2	17	Working for officers who make you want to achieve your absolute best.
	INSN3	18	Commanders who bring out the best in their subordinates.
	INSN4	19	Leaders who make junior officer development a priority.
	INSN5	20	Senior officers who foster a positive climate among junior officers.
Leadership Opportunity	LOPN1	21	Using your leadership abilities.
	LOPN2	22	Being in charge of a team.
	LOPN3	23	Having your unit look to you for direction.
	LOPN4	24	Being responsible for the efforts of others.
	LOPN5	25	Leading the way for your team.
Meaningful Purpose	MPUN1	26	Doing good for other people.

	MPUN2	27	Giving help to those in need.
	MPUN3	28	Making important contributions on behalf of your community.
	MPUN4	29	Being of service to society.
	MPUN5	30	Protecting the well-being of others.
Recognition of Potential	ROPN1	31	Knowing your organization considers your work valuable.
	ROPN2	32	Knowing that good work will be rewarded with increasing responsibility.
	ROPN3	33	Getting recognition when you do a good job.
	ROPN4	34	Being acknowledged when you do your job well.
	ROPN5	35	Receiving opportunities based on your performance.
Teammates	TEMN1	36	Forming friendships with other people in your unit.
	TEMN2	37	Getting to know your teammates quite well.
	TEMN3	38	Working with a spirit of cooperation among your team members.
	TEMN4	39	Developing strong ties with your team members.
	TEMN5	40	Having a solid sense of camaraderie with the members in your team.
Variety	VARN1	41	Experiencing changes in your daily tasks.
	VARN2	42	Having variety in your assignments.
	VARN3	43	Being able to do a wide range of tasks.
	VARN4	44	Doing many different things on the job.
	VARN5	45	Having a broad assortment of things to do.
Way of Life	WOLN1	46	Being able to balance work with the rest of your life.
	WOLN2	47	Keeping work from interfering with your personal life.
	WOLN3	48	Leading the kind of personal life you desire.
	WOLN4	49	Having a fulfilled life outside of work.
	WOLN5	50	Maintaining strong relationships with friends and family.

Table 7 continued

Dimension			4 - Item Survey (40 Total)
Autonomy			
	AUTN2	1	Making your own decisions.
	AUTN3	2	Doing your work in your own way.
	AUTN4	3	Determining the way you get your tasks done.
	AUTN5	4	Being able to decide how to get your job done.
Challenge			
	CHAN2	5	Being constantly challenged.
	CHAN3	6	Doing assignments that are demanding.
	CHAN4	7	Working on tasks that make you push yourself.
	CHAN5	8	Tackling assignments that are really tough.
Compensation/Benefits			
	COMN2	9	Enough pay to be comfortable.
	COMN3	10	Receiving sufficient money to live well.
	COMN4	11	Total benefits earned are fair.
	COMN5	12	The opportunity to become financially wealthy.
Inspirational Leadership			
	INSN2	13	Working for officers who make you want to achieve your absolute best.
	INSN3	14	Commanders who bring out the best in their subordinates.
	INSN4	15	Leaders who make junior officer development a priority.
	INSN5	16	Senior officers who foster a positive climate among junior officers.
Leadership Opportunity	LOPN1	17	Using your leadership abilities.
	LOPN3	18	Having your unit look to you for direction.
	LOPN4	19	Being responsible for the efforts of others.
	LOPN5	20	Leading the way for your team.
Meaningful Purpose	MPUN1	21	Doing good for other people.
	MPUN2	22	Giving help to those in need.

	MPUN4	23	Being of service to society.
	MPUN5	24	Protecting the well-being of others.
Recognition of Potential			
	ROPN2	25	Knowing that good work will be rewarded with increasing responsibility.
	ROPN3	26	Getting recognition when you do a good job.
	ROPN4	27	Being acknowledged when you do your job well.
	ROPN5	28	Receiving opportunities based on your performance.
Teammates			
	TEMN2	29	Getting to know your teammates quite well.
	TEMN3	30	Working with a spirit of cooperation among your team members.
	TEMN4	31	Developing strong ties with your team members.
	TEMN5	32	Having a solid sense of camaraderie with the members in your team.
Variety			
	VARN2	33	Having variety in your assignments.
	VARN3	34	Being able to do a wide range of tasks.
	VARN4	35	Doing many different things on the job.
	VARN5	36	Having a broad assortment of things to do.
Way of Life	WOLN1	37	Being able to balance work with the rest of your life.
	WOLN3	38	Leading the kind of personal life you desire.
	WOLN4	39	Having a fulfilled life outside of work.
	WOLN5	40	Maintaining strong relationships with friends and family.

Table 7 continued

Dimension			3 - Item Survey (30 Total)
Autonomy			
	AUTN3	1	Doing your work in your own way.
	AUTN4	2	Determining the way you get your tasks done.
	AUTN5	3	Being able to decide how to get your job done.
Challenge			
	CHAN3	4	Doing assignments that are demanding.
	CHAN4	5	Working on tasks that make you push yourself.
	CHAN5	6	Tackling assignments that are really tough.
Compensation/Benefits			
	COMN2	7	Enough pay to be comfortable.
	COMN3	8	Receiving sufficient money to live well.
	COMN5	9	The opportunity to become financially wealthy.
Inspirational Leadership			
	INSN2	10	Working for officers who make you want to achieve your absolute best.
	INSN3	11	Commanders who bring out the best in their subordinates.
	INSN5	12	Senior officers who foster a positive climate among junior officers.
Leadership Opportunity	LOPN1	13	Using your leadership abilities.
	LOPN3	14	Having your unit look to you for direction.
	LOPN5	15	Leading the way for your team.
Meaningful Purpose	MPUN1	16	Doing good for other people.
	MPUN2	17	Giving help to those in need.
	MPUN4	18	Being of service to society.
Recognition of Potential			
	ROPN2	19	Knowing that good work will be rewarded with increasing responsibility.
	ROPN3	20	Getting recognition when you do a good job.
	ROPN4	21	Being acknowledged when you do your job well.

Teammates			
	TEMN2	22	Getting to know your teammates quite well.
	TEMN4	23	Developing strong ties with your team members.
	TEMN5	24	Having a solid sense of camaraderie with the members in your team.
Variety			
	VARN3	25	Being able to do a wide range of tasks.
	VARN4	26	Doing many different things on the job.
	VARN5	27	Having a broad assortment of things to do.
Way of Life	WOLN1	28	Being able to balance work with the rest of your life.
	WOLN3	29	Leading the kind of personal life you desire.
	WOLN4	30	Having a fulfilled life outside of work.

Table 8. Cadet Pretest of Needs-Rewards Survey, Results of Confirmatory Factor Analysis Tests for Model Fit

	5-Item, 10 Factor Models				4-Item, 10 Factor Models				3-Item, 10 Factor Models			
Rewards (REW) 10 Factors		MFF c^2	df	N		MFF c^2	df	N		MFF c^2	df	N
	Null Model	29665.926	1225	788	Null Model	23827.211	780	788	Null Model	16689.545	435	788
	Target Model	3661.883	1130		Target Model	2305.269	695		Target Model	1114.681	360	
	RMSEA	0.053			RMSEA	0.054			RMSEA	0.052		
	CFI	0.911			CFI	0.930			CFI	0.954		
Needs (NED) 10 Factors		MFF c^2	df	N		MFF c^2	df	N		MFF c^2	df	N
	Null Model	29032.244	1225	788	Null Model	23276.298	780	788	Null Model	16205.181	435	788
	Target Model	3938.113	1130		Target Model	2660.438	695		Target Model	1146.216	360	
	RMSEA	0.056			RMSEA	0.060			RMSEA	0.053		
	CFI	0.899			CFI	0.913			CFI	0.950		
Importance (IMP) 10 Factors		MFF c^2	df	N		MFF c^2	df	N		MFF c^2	df	N
	Null Model	27547.595	1225	788	Null Model	22192.464	780	788	Null Model	15425.361	435	788
	Target Model	4289.252	1130		Target Model	2887.440	695		Target Model	1276.978	360	
	RMSEA	0.060			RMSEA	0.063			RMSEA	0.057		
	CFI	0.880			CFI	0.898			CFI	0.939		

Table 8 continued

FULL MODEL with IMPORTANCE, REWARDS, & NEEDS			
3-Item, 30 Factor Model			
	MFF c^2	df	N
Null Model	59755.130	4005	788
Target Model	6331.146	3390	
RMSEA	0.033		
CFI	0.947		

Note: Chi-Square for model (c2). MFF, Minimum Fit Function. CFI Comparative Fit Index; >.95 (Hu & Bentler, 1999). RMSEA, Root Mean Squared Error of Approximation; <.06 (Hu & Bentler, 1999).

Table 9. Details by Item for Rewards (3-Item Survey) - Cadet Pretest

	AUTR	CHAR	COMR	INSR	LOPR	MPUR	ROPR	TEMR	VARR	WOLR
AUTR3	**0.844**	-0.014	0.009	-0.039	-0.012	0.052	-0.033	-0.006	-0.002	0.070
AUTR4	**0.884**	0.041	-0.016	-0.009	0.028	0.013	-0.062	-0.012	0.018	0.013
AUTR5	**0.887**	-0.029	0.008	0.043	-0.018	-0.059	0.091	0.017	-0.016	-0.075
CHAR3	-0.026	**0.839**	-0.033	-0.028	0.016	0.036	0.003	-0.005	0.005	-0.022
CHAR4	0.036	**0.879**	0.031	0.087	0.075	0.045	0.043	0.060	-0.023	0.056
CHAR5	-0.013	**0.906**	-0.002	-0.059	-0.084	-0.071	-0.042	-0.052	0.018	-0.034
COMR2	-0.054	0.030	**0.863**	0.005	0.016	-0.021	0.008	0.039	0.012	-0.074
COMR3	-0.003	-0.089	**0.916**	-0.052	-0.073	-0.034	-0.103	-0.075	-0.097	0.037
COMR5	0.121	0.131	**0.628**	0.102	0.119	0.116	0.176	0.083	0.174	0.077
INSR2	0.012	0.050	-0.001	**0.790**	-0.023	0.029	0.016	-0.071	0.051	-0.042
INSR3	-0.054	0.002	0.007	**0.865**	0.061	0.043	0.030	0.030	-0.022	0.016
INSR5	0.047	-0.050	-0.007	**0.809**	-0.041	-0.074	-0.048	0.038	-0.026	0.022
LOPR1	-0.041	0.058	0.028	0.005	**0.792**	0.218	-0.086	0.078	0.014	-0.015
LOPR3	0.092	-0.081	-0.002	-0.028	**0.791**	-0.002	0.112	-0.223	-0.001	0.067
LOPR5	-0.045	0.020	-0.024	0.020	**0.848**	-0.205	-0.023	0.133	-0.012	-0.046
MPUR1	0.010	-0.158	-0.073	-0.047	-0.041	**0.810**	-0.082	-0.001	-0.175	0.031
MPUR2	-0.068	0.011	-0.024	-0.065	-0.017	**0.837**	-0.039	-0.076	0.014	-0.070
MPUR4	0.065	0.155	0.105	0.120	0.058	**0.785**	0.129	0.083	0.168	0.045
ROPR2	0.229	0.324	0.080	0.352	0.496	0.425	**0.650**	0.264	0.428	0.124
ROPR3	-0.109	-0.139	0.006	-0.188	-0.185	-0.130	**0.837**	-0.126	-0.223	-0.046
ROPR4	-0.046	-0.074	-0.058	-0.058	-0.198	-0.171	**0.856**	-0.054	-0.087	-0.031
TEMR2	-0.052	0.011	0.033	-0.049	0.079	0.034	-0.037	**0.813**	-0.016	-0.019
TEMR4	0.016	0.024	-0.046	-0.011	-0.069	-0.050	-0.006	**0.873**	0.040	0.010
TEMR5	0.027	-0.033	0.019	0.054	-0.003	0.020	0.037	**0.877**	-0.026	0.005
VARR2	0.075	0.027	-0.005	0.051	0.067	0.101	-0.002	-0.051	**0.770**	0.072
VARR4	0.060	-0.078	-0.030	0.004	0.050	0.078	0.036	0.083	**0.847**	0.011
VARR5	-0.119	0.054	0.033	-0.045	-0.105	-0.158	-0.034	-0.040	**0.860**	-0.067

WOLR1	-0.073	-0.055	-0.138	-0.005	-0.019	0.024	-0.106	0.010	-0.061	**0.673**
WOLR3	-0.002	-0.054	-0.037	-0.063	-0.025	-0.059	-0.021	-0.079	-0.048	**0.800**
WOLR4	0.060	0.090	0.137	0.065	0.039	0.039	0.098	0.069	0.091	**0.842**

Table 9 continued

	OMEGA	**ITEM**	**PRIMARY**	**CROSS-LOADINGS**	
				ABS AVG	ABS MAX
AUTR3	**0.905**	**AUTR3**	**0.844**	0.026	0.070
AUTR4		**AUTR4**	**0.884**	0.024	0.062
AUTR5		**AUTR5**	**0.887**	0.040	0.091
CHAR3	**0.907**	**CHAR3**	**0.839**	0.019	0.036
CHAR4		**CHAR4**	**0.879**	0.051	0.087
CHAR5		**CHAR5**	**0.906**	0.042	0.084
COMR2	**0.850**	**COMR2**	**0.863**	0.029	0.074
COMR3		**COMR3**	**0.916**	0.063	0.103
COMR5		**COMR5**	**0.628**	0.122	0.176
INSR2	**0.862**	**INSR2**	**0.790**	0.033	0.071
INSR3		**INSR3**	**0.865**	0.029	0.061
INSR5		**INSR5**	**0.809**	0.039	0.074
LOPR1	**0.852**	**LOPR1**	**0.792**	0.060	0.218
LOPR3		**LOPR3**	**0.791**	0.068	0.223
LOPR5		**LOPR5**	**0.848**	0.059	0.205
MPUR1	**0.852**	**MPUR1**	**0.810**	0.069	0.175
MPUR2		**MPUR2**	**0.837**	0.043	0.076
MPUR4		**MPUR4**	**0.785**	0.103	0.168
ROPR2	**0.828**	**ROPR2**	**0.650**	0.302	0.496
ROPR3		**ROPR3**	**0.837**	0.128	0.223
ROPR4		**ROPR4**	**0.856**	0.086	0.198

TEMR2	**0.890**	**TEMR2**	**0.813**	0.037	0.079
TEMR4		**TEMR4**	**0.873**	0.030	0.069
TEMR5		**TEMR5**	**0.877**	0.025	0.054
VARR2	**0.866**	**VARR2**	**0.770**	0.050	0.101
VARR4		**VARR4**	**0.847**	0.048	0.083
VARR5		**VARR5**	**0.860**	0.073	0.158
WOLR1	**0.817**	**WOLR1**	**0.673**	0.055	0.138
WOLR3		**WOLR3**	**0.800**	0.043	0.079
WOLR4		**WOLR4**	**0.842**	0.076	0.137

Note: Primary loadings are shown in bold on the diagonal. Cross-loadings that are underlined are significant at the $p < .05$ level. Average and maximum cross-loadings are absolute values.

Table 10. Details by Item for Needs (3-Item Survey) - Cadet Pretest

	AUTN	CHAN	COMN	INSN	LOPN	MPUN	ROPN	TEMN	VARN	WOLN
AUTN3	**0.812**	-0.102	0.108	-0.041	-0.086	0.022	0.018	-0.051	-0.060	0.075
AUTN4	**0.845**	0.134	-0.079	0.061	0.112	0.008	-0.042	0.058	0.084	-0.039
AUTN5	**0.864**	-0.038	-0.018	-0.022	-0.031	-0.027	0.024	-0.012	-0.027	-0.029
CHAN3	0.010	**0.823**	0.046	0.052	-0.020	0.014	0.112	-0.038	0.056	-0.036
CHAN4	0.048	**0.856**	0.042	0.101	0.171	0.083	-0.002	0.124	-0.138	0.121
CHAN5	-0.059	**0.838**	-0.088	-0.154	-0.156	-0.099	-0.105	-0.093	0.086	-0.093
COMN2	-0.013	-0.003	**0.849**	0.031	0.015	0.033	-0.028	0.026	-0.001	0.015
COMN3	0.014	0.047	**0.938**	0.022	0.031	0.033	-0.046	0.019	0.010	0.046
COMN5	-0.004	-0.085	**0.728**	-0.092	-0.083	-0.117	0.122	-0.079	-0.016	-0.093
INSN2	0.036	0.052	0.009	**0.820**	0.010	-0.016	0.033	-0.053	0.078	0.003
INSN3	-0.039	-0.029	0.010	**0.883**	-0.028	0.028	0.008	-0.071	-0.063	0.002
INSN5	0.009	-0.021	-0.021	**0.803**	0.019	-0.015	-0.045	0.131	-0.009	-0.005
LOPN1	-0.137	0.039	-0.068	0.013	**0.763**	0.240	-0.054	0.178	-0.118	-0.059
LOPN3	0.125	0.022	0.093	0.079	**0.788**	-0.101	0.070	-0.273	0.103	0.046
LOPN5	0.004	-0.056	-0.027	-0.088	**0.823**	-0.120	-0.019	0.099	0.010	0.010
MPUN1	-0.044	-0.096	-0.022	-0.025	-0.048	**0.836**	-0.008	0.028	-0.096	0.010
MPUN2	-0.026	-0.059	-0.008	-0.072	-0.096	**0.841**	-0.090	-0.091	-0.010	-0.023
MPUN4	0.076	0.166	0.034	0.102	0.149	**0.803**	0.108	0.066	0.114	0.015
ROPN2	0.313	0.424	-0.017	0.384	0.426	0.321	**0.549**	0.306	0.398	0.101
ROPN3	-0.075	-0.085	-0.021	-0.079	-0.095	-0.093	**0.901**	-0.075	-0.103	-0.039
ROPN4	-0.047	-0.060	0.028	-0.055	-0.056	-0.012	**0.892**	-0.026	-0.042	0.002
TEMN2	0.023	0.024	0.043	-0.010	0.040	-0.004	0.022	**0.806**	0.033	-0.006
TEMN4	0.030	0.025	-0.002	0.101	0.040	-0.049	0.003	**0.848**	0.023	0.002
TEMN5	-0.050	-0.046	-0.035	-0.091	-0.079	0.051	-0.022	**0.859**	-0.051	0.004
VARN2	0.009	0.036	0.013	0.039	-0.040	0.036	-0.009	-0.030	**0.782**	0.013
VARN4	0.035	-0.012	-0.016	-0.041	-0.027	-0.010	0.000	-0.025	**0.825**	-0.037
VARN5	-0.042	-0.023	0.004	0.006	0.064	-0.022	0.008	0.051	**0.852**	0.025

WOLN1	-0.011	0.006	-0.030	0.084	0.033	0.052	-0.025	0.068	0.009	**0.730**
WOLN3	0.007	-0.077	0.101	-0.111	-0.088	-0.104	0.021	-0.140	-0.073	**0.796**
WOLN4	0.002	0.067	-0.073	0.037	0.056	0.056	0.000	0.076	0.061	**0.852**

Table 10 continued

	OMEGA	**ITEM**	**PRIMARY**	**CROSS-LOADINGS**	
				ABS AVG	ABS MAX
AUTN3	**0.878**	**AUTN3**	**0.812**	0.063	0.108
AUTN4		**AUTN4**	**0.845**	0.069	0.134
AUTN5		**AUTN5**	**0.864**	0.025	0.038
CHAN3	**0.877**	**CHAN3**	**0.823**	0.043	0.112
CHAN4		**CHAN4**	**0.856**	0.092	0.171
CHAN5		**CHAN5**	**0.838**	0.104	0.156
COMN2	**0.879**	**COMN2**	**0.849**	0.018	0.033
COMN3		**COMN3**	**0.938**	0.030	0.047
COMN5		**COMN5**	**0.728**	0.077	0.122
INSN2	**0.874**	**INSN2**	**0.820**	0.032	0.078
INSN3		**INSN3**	**0.883**	0.031	0.071
INSN5		**INSN5**	**0.803**	0.031	0.131
LOPN1	**0.834**	**LOPN1**	**0.763**	0.101	0.240
LOPN3		**LOPN3**	**0.788**	0.101	0.273
LOPN5		**LOPN5**	**0.823**	0.048	0.120
MPUN1	**0.866**	**MPUN1**	**0.836**	0.042	0.096
MPUN2		**MPUN2**	**0.841**	0.053	0.096
MPUN4		**MPUN4**	**0.803**	0.092	0.166
ROPN2	**0.834**	**ROPN2**	**0.549**	0.299	0.426
ROPN3		**ROPN3**	**0.901**	0.074	0.103
ROPN4		**ROPN4**	**0.892**	0.036	0.060

TEMN2	**0.876**	**TEMN2**	**0.806**	0.023	0.043
TEMN4		**TEMN4**	**0.848**	0.031	0.101
TEMN5		**TEMN5**	**0.859**	0.048	0.091
VARN2	**0.860**	**VARN2**	**0.782**	0.025	0.040
VARN4		**VARN4**	**0.825**	0.023	0.041
VARN5		**VARN5**	**0.852**	0.027	0.064
WOLN1	**0.836**	**WOLN1**	**0.730**	0.035	0.084
WOLN3		**WOLN3**	**0.796**	0.080	0.140
WOLN4		**WOLN4**	**0.852**	0.048	0.076

Note: Primary loadings are shown in bold on the diagonal. Cross-loadings that are underlined are significant at the $p < .05$ level. Average and maximum cross-loadings are absolute values.

Table 11. Details by Item for Importance (3-Item Survey) - Cadet Pretest

	AUTI	CHAI	COMI	INSI	LOPI	MPUI	ROPI	TEMI	VARI	WOLI
AUTI3	**0.736**	-0.184	0.117	-0.130	-0.212	-0.113	0.119	-0.174	-0.123	0.031
AUTI4	**0.831**	0.202	-0.077	0.102	0.154	0.048	-0.093	0.080	0.131	-0.035
AUTI5	**0.863**	-0.052	-0.012	-0.001	0.014	0.036	-0.001	0.052	-0.027	0.010
CHAI3	0.012	**0.808**	-0.011	-0.071	-0.061	-0.013	0.068	-0.057	-0.039	-0.042
CHAI4	0.010	**0.822**	0.015	0.188	0.283	0.126	-0.055	0.177	-0.028	0.086
CHAI5	-0.018	**0.896**	-0.004	-0.104	-0.203	-0.097	-0.008	-0.106	0.060	-0.038
COMI2	-0.015	-0.001	**0.876**	0.045	0.030	0.031	-0.044	0.036	-0.019	-0.017
COMI3	-0.017	0.010	**0.942**	-0.016	-0.006	0.002	-0.026	-0.016	0.000	-0.031
COMI5	0.065	-0.019	**0.716**	-0.057	-0.047	-0.069	0.131	-0.038	0.038	0.083
INSI2	0.019	0.033	-0.001	**0.820**	-0.065	0.032	-0.015	-0.077	-0.005	-0.006
INSI3	-0.055	-0.034	-0.010	**0.889**	-0.029	0.006	0.005	-0.013	-0.046	-0.008
INSI5	0.048	0.006	0.013	**0.795**	0.097	-0.042	0.010	0.095	0.062	0.016
LOPI1	-0.227	-0.069	-0.110	0.063	**0.710**	0.252	-0.180	0.162	-0.177	-0.099
LOPI3	0.257	0.082	0.125	0.009	**0.711**	-0.121	0.234	-0.170	0.151	0.170
LOPI5	-0.026	-0.012	-0.013	-0.064	**0.833**	-0.113	-0.046	0.007	0.023	-0.060
MPUI1	-0.053	-0.007	-0.018	-0.016	0.013	**0.810**	-0.048	0.024	-0.038	-0.044
MPUI2	-0.007	-0.073	0.013	-0.013	-0.051	**0.835**	0.002	-0.023	-0.015	0.039
MPUI4	0.063	0.086	0.004	0.030	0.040	**0.793**	0.048	-0.001	0.055	0.004
ROPI2	0.315	0.443	0.083	0.464	0.499	0.343	**0.388**	0.356	0.374	0.212
ROPI3	-0.103	-0.090	0.045	-0.073	-0.099	-0.078	**0.883**	-0.056	-0.080	-0.008
ROPI4	0.012	-0.006	-0.074	-0.030	-0.011	0.008	**0.896**	-0.019	-0.008	-0.054
TEMI2	-0.049	-0.006	-0.038	-0.037	-0.011	0.034	-0.023	**0.836**	-0.029	-0.040
TEMI4	0.030	0.008	-0.012	-0.084	-0.021	-0.042	0.007	**0.888**	0.020	-0.001
TEMI5	0.015	-0.003	0.052	0.128	0.033	0.013	0.015	**0.832**	0.007	0.042
VARI2	0.078	-0.074	0.118	0.158	0.061	0.054	0.062	0.051	**0.703**	0.149
VARI4	-0.017	0.048	-0.024	-0.044	-0.031	0.004	-0.039	-0.012	**0.850**	-0.006
VARI5	-0.035	0.013	-0.046	-0.057	-0.013	-0.036	0.001	-0.020	**0.891**	-0.083

WOLI1	-0.039	0.004	-0.129	0.171	0.075	0.101	-0.129	0.107	-0.016	**0.621**
WOLI3	0.015	-0.077	0.192	-0.124	-0.103	-0.140	0.068	-0.116	-0.048	**0.792**
WOLI4	0.012	0.073	-0.084	0.006	0.051	0.071	0.024	0.043	0.059	**0.816**

Table 11 continued

	OMEGA	ITEM	PRIMARY	CROSS-LOADINGS	
				ABS AVG	ABS MAX
AUTI3	**0.852**	**AUTI3**	**0.736**	0.134	0.212
AUTI4		**AUTI4**	**0.831**	0.102	0.202
AUTI5		**AUTI5**	**0.863**	0.023	0.052
CHAI3	**0.880**	**CHAI3**	**0.808**	0.042	0.071
CHAI4		**CHAI4**	**0.822**	0.108	0.283
CHAI5		**CHAI5**	**0.896**	0.071	0.203
COMI2	**0.885**	**COMI2**	**0.876**	0.026	0.045
COMI3		**COMI3**	**0.942**	0.014	0.031
COMI5		**COMI5**	**0.716**	0.061	0.131
INSI2	**0.874**	**INSI2**	**0.820**	0.028	0.077
INSI3		**INSI3**	**0.889**	0.023	0.055
INSI5		**INSI5**	**0.795**	0.043	0.097
LOPI1	**0.797**	**LOPI1**	**0.710**	0.149	0.252
LOPI3		**LOPI3**	**0.711**	0.147	0.257
LOPI5		**LOPI5**	**0.833**	0.040	0.113
MPUI1	**0.854**	**MPUI1**	**0.810**	0.029	0.053
MPUI2		**MPUI2**	**0.835**	0.026	0.073
MPUI4		**MPUI4**	**0.793**	0.037	0.086
ROPI2	**0.788**	**ROPI2**	**0.388**	0.343	0.499
ROPI3		**ROPI3**	**0.883**	0.070	0.103
ROPI4		**ROPI4**	**0.896**	0.025	0.074

TEMI2	**0.888**	**TEMI2**	**0.836**	0.030	0.049
TEMI4		**TEMI4**	**0.888**	0.025	0.084
TEMI5		**TEMI5**	**0.832**	0.034	0.128
VARI2	**0.858**	**VARI2**	**0.703**	0.089	0.158
VARI4		**VARI4**	**0.850**	0.025	0.048
VARI5		**VARI5**	**0.891**	0.034	0.083
WOLI1	**0.790**	**WOLI1**	**0.621**	0.086	0.171
WOLI3		**WOLI3**	**0.792**	0.098	0.192
WOLI4		**WOLI4**	**0.816**	0.047	0.084

Note: Primary loadings are shown in bold on the diagonal. Cross-loadings that are underlined are significant at the $p < .05$ level. Average and maximum cross-loadings are absolute values. Reliability (omega) reported for each factor.

Table 12. PHI Matrix, Correlations of Factors in the 3 Item, 10 Dimension Model (30-Factors)

				1	2	3	4	5	6	7	8	9	10
		MEAN	SDEV	AUTR	AUTN	AUTI	CHAR	CHAN	CHAI	COMR	COMN	COMI	INSR
1	AUTR	4.04	1.23	1.00									
2	AUTN	5.04	0.95	0.36	1.00								
3	AUTI	4.81	1.04	0.22	0.68	1.00							
4	CHAR	4.43	1.33	0.40	0.19	0.18	1.00						
5	CHAN	5.15	0.99	0.30	0.50	0.35	0.46	1.00					
6	CHAI	5.24	1.07	0.22	0.37	0.53	0.24	0.77	1.00				
7	COMR	3.16	1.28	0.33	0.11	0.10	0.31	0.19	0.13	1.00			
8	COMN	4.22	1.34	0.04	0.30	0.17	0.10	0.02	-0.09	0.30	1.00		
9	COMI	4.28	1.36	0.02	0.19	0.28	0.05	-0.12	-0.07	0.19	0.78	1.00	
10	INSR	4.46	1.28	0.48	0.12	0.08	0.54	0.36	0.26	0.32	0.00	-0.02	1.00
11	INSN	5.66	0.98	0.24	0.43	0.21	0.32	0.62	0.44	0.15	0.18	0.05	0.44
12	INSI	5.97	0.93	0.16	0.34	0.33	0.23	0.48	0.57	0.06	0.12	0.16	0.30
13	LOPR	4.27	1.35	0.59	0.21	0.18	0.66	0.40	0.31	0.36	-0.03	0.01	0.67
14	LOPN	5.53	0.96	0.30	0.57	0.31	0.37	0.77	0.57	0.16	0.10	-0.04	0.42
15	LOPI	5.68	0.91	0.24	0.45	0.51	0.28	0.60	0.77	0.10	-0.03	0.03	0.37
16	MPUR	4.37	1.38	0.59	0.20	0.15	0.53	0.35	0.25	0.35	-0.04	0.00	0.60
17	MPUN	5.77	1.03	0.24	0.39	0.14	0.29	0.55	0.34	0.17	0.06	-0.07	0.33
18	MPUI	6.02	0.95	0.17	0.21	0.20	0.23	0.35	0.44	0.13	-0.05	-0.03	0.29
19	ROPR	3.77	1.14	0.55	0.27	0.26	0.48	0.29	0.24	0.49	0.18	0.15	0.56
20	ROPN	4.47	1.09	0.24	0.43	0.33	0.19	0.28	0.20	0.25	0.49	0.42	0.14
21	ROPI	4.40	1.14	0.11	0.31	0.46	0.11	0.12	0.21	0.14	0.40	0.52	0.02
22	TEMR	4.98	1.27	0.40	0.22	0.15	0.56	0.40	0.26	0.29	-0.05	-0.05	0.68
23	TEMN	5.85	0.95	0.22	0.41	0.17	0.33	0.55	0.36	0.11	0.08	-0.01	0.39
24	TEMI	6.01	0.91	0.20	0.30	0.30	0.25	0.43	0.53	0.06	-0.01	0.03	0.33
25	VARR	3.95	1.24	0.61	0.24	0.20	0.83	0.41	0.24	0.41	0.10	0.08	0.61
26	VARN	4.87	0.98	0.29	0.58	0.40	0.39	0.81	0.61	0.21	0.16	0.01	0.32
27	VARI	4.93	1.10	0.20	0.40	0.60	0.24	0.54	0.76	0.15	0.04	0.09	0.24

28	WOLR	4.06	1.32	0.54	0.17	0.10	0.08	0.21	0.19	0.38	0.09	0.03	0.40
29	WOLN	5.30	1.08	0.19	0.42	0.19	0.08	0.14	-0.01	0.11	0.63	0.48	0.09
30	WOLI	5.44	1.08	0.14	0.31	0.40	0.08	0.00	0.11	0.12	0.55	0.66	0.08

Table 12 continued

				11	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
		MEAN	SDEV	INSN	INSI	LOPR	LOPN	LOPI	MPUR	MPUN	MPUI	ROPR	ROPN
1	AUTR	4.04	1.23										
2	AUTN	5.04	0.95										
3	AUTI	4.81	1.04										
4	CHAR	4.43	1.33										
5	CHAN	5.15	0.99										
6	CHAI	5.24	1.07										
7	COMR	3.16	1.28										
8	COMN	4.22	1.34										
9	COMI	4.28	1.36										
10	INSR	4.46	1.28										
11	INSN	5.66	0.98	1.00									
12	INSI	5.97	0.93	0.76	1.00								
13	LOPR	4.27	1.35	0.39	0.31	1.00							
14	LOPN	5.53	0.96	0.80	0.62	0.51	1.00						
15	LOPI	5.68	0.91	0.59	0.76	0.41	0.80	1.00					
16	MPUR	4.37	1.38	0.35	0.28	0.82	0.41	0.36	1.00				
17	MPUN	5.77	1.03	0.63	0.44	0.34	0.69	0.48	0.45	1.00			
18	MPUI	6.02	0.95	0.42	0.53	0.29	0.46	0.59	0.35	0.77	1.00		
19	ROPR	3.77	1.14	0.23	0.15	0.64	0.33	0.25	0.55	0.22	0.20	1.00	
20	ROPN	4.47	1.09	0.31	0.23	0.22	0.33	0.24	0.18	0.19	0.06	0.50	1.00
21	ROPI	4.40	1.14	0.15	0.24	0.09	0.13	0.27	0.08	0.02	0.03	0.34	0.80

22	TEMR	4.98	1.27	0.45	0.32	0.74	0.50	0.40	0.64	0.41	0.34	0.54	0.14
23	TEMN	5.85	0.95	0.76	0.57	0.43	0.79	0.60	0.40	0.68	0.46	0.25	0.23
24	TEMI	6.01	0.91	0.58	0.71	0.34	0.61	0.80	0.33	0.49	0.61	0.20	0.14
25	VARR	3.95	1.24	0.33	0.21	0.72	0.36	0.27	0.66	0.27	0.20	0.59	0.25
26	VARN	4.87	0.98	0.59	0.43	0.37	0.68	0.51	0.31	0.46	0.29	0.34	0.37
27	VARI	4.93	1.10	0.37	0.50	0.29	0.44	0.62	0.21	0.22	0.33	0.29	0.27
28	WOLR	4.06	1.32	0.24	0.16	0.44	0.30	0.24	0.54	0.26	0.21	0.34	0.11
29	WOLN	5.30	1.08	0.39	0.24	0.12	0.32	0.16	0.13	0.34	0.15	0.15	0.34
30	WOLI	5.44	1.08	0.24	0.37	0.13	0.16	0.27	0.14	0.15	0.23	0.19	0.31

Table 12 continued

				21	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
		MEAN	SDEV	ROPI	TEMR	TEMN	TEMI	VARR	VARN	VARI	WOLR	WOLN	WOLI
1	AUTR	4.04	1.23										
2	AUTN	5.04	0.95										
3	AUTI	4.81	1.04										
4	CHAR	4.43	1.33										
5	CHAN	5.15	0.99										
6	CHAI	5.24	1.07										
7	COMR	3.16	1.28										
8	COMN	4.22	1.34										
9	COMI	4.28	1.36										
10	INSR	4.46	1.28										
11	INSN	5.66	0.98										
12	INSI	5.97	0.93										
13	LOPR	4.27	1.35										
14	LOPN	5.53	0.96										
15	LOPI	5.68	0.91										

16	MPUR	4.37	1.38										
17	MPUN	5.77	1.03										
18	MPUI	6.02	0.95										
19	ROPR	3.77	1.14										
20	ROPN	4.47	1.09										
21	ROPI	4.40	1.14	1.00									
22	TEMR	4.98	1.27	0.02	1.00								
23	TEMN	5.85	0.95	0.06	0.61	1.00							
24	TEMI	6.01	0.91	0.12	0.44	0.76	1.00						
25	VARR	3.95	1.24	0.15	0.59	0.30	0.25	1.00					
26	VARN	4.87	0.98	0.22	0.34	0.51	0.40	0.45	1.00				
27	VARI	4.93	1.10	0.33	0.21	0.28	0.44	0.28	0.73	1.00			
28	WOLR	4.06	1.32	0.02	0.31	0.22	0.21	0.34	0.25	0.14	1.00		
29	WOLN	5.30	1.08	0.25	0.11	0.37	0.22	0.12	0.25	0.07	0.34	1.00	
30	WOLI	5.44	1.08	0.42	0.09	0.21	0.27	0.09	0.10	0.21	0.22	0.81	1.00

Note: N = 788. Table entries are factor correlations. Correlations greater than .12 in absolute magnitude are statistically significant at $p < .05$. All correlations are significantly less than 1.00 at $p < .05$.

Table 13. Pairwise Correlations of Factors in the 3 Item, 10 Dimension Model (30-Factors)

				1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
		MEAN	SDEV	AUTR	AUTN	AUTI	CHAR	CHAN	CHAI	COMR	COMN	COMI	INSR
1	AUTR	4.04	1.23	**0.90**									
2	AUTN	5.04	0.95	0.34	**0.88**								
3	AUTI	4.81	1.04	0.19	0.59	**0.85**							
4	CHAR	4.43	1.33	0.36	0.17	0.14	**0.91**						
5	CHAN	5.15	0.99	0.27	0.44	0.28	0.45	**0.88**					
6	CHAI	5.24	1.07	0.19	0.33	0.45	0.21	0.68	**0.88**				
7	COMR	3.16	1.28	0.32	0.11	0.12	0.30	0.16	0.10	**0.85**			
8	COMN	4.22	1.34	0.05	0.26	0.18	0.10	-0.01	-0.09	0.34	**0.88**		
9	COMI	4.28	1.36	0.04	0.16	0.27	0.05	-0.13	-0.07	0.21	0.75	**0.89**	
10	INSR	4.46	1.28	0.42	0.10	0.06	0.48	0.32	0.23	0.30	0.02	0.00	**0.86**
11	INSN	5.66	0.98	0.21	0.38	0.17	0.29	0.55	0.39	0.12	0.14	0.02	0.43
12	INSI	5.97	0.93	0.13	0.30	0.28	0.20	0.42	0.50	0.04	0.10	0.13	0.26
13	LOPR	4.27	1.35	0.52	0.18	0.14	0.58	0.34	0.27	0.33	0.00	0.02	0.57
14	LOPN	5.53	0.96	0.26	0.48	0.26	0.33	0.66	0.50	0.13	0.07	-0.05	0.36
15	LOPI	5.68	0.91	0.20	0.37	0.41	0.25	0.51	0.65	0.09	-0.03	0.02	0.32
16	MPUR	4.37	1.38	0.52	0.17	0.12	0.48	0.32	0.22	0.32	-0.01	0.01	0.51
17	MPUN	5.77	1.03	0.21	0.34	0.11	0.27	0.49	0.31	0.14	0.02	-0.08	0.29
18	MPUI	6.02	0.95	0.14	0.18	0.16	0.20	0.32	0.40	0.09	-0.06	-0.04	0.25
19	ROPR	3.77	1.14	0.51	0.23	0.22	0.48	0.28	0.23	0.46	0.17	0.15	0.52
20	ROPN	4.47	1.09	0.24	0.43	0.33	0.21	0.34	0.25	0.25	0.44	0.37	0.16
21	ROPI	4.40	1.14	0.12	0.32	0.45	0.13	0.20	0.30	0.17	0.38	0.48	0.06
22	TEMR	4.98	1.27	0.35	0.19	0.12	0.51	0.35	0.23	0.28	-0.03	-0.04	0.60
23	TEMN	5.85	0.95	0.19	0.36	0.13	0.29	0.48	0.33	0.09	0.05	-0.03	0.34
24	TEMI	6.01	0.91	0.17	0.26	0.24	0.23	0.38	0.47	0.04	-0.01	0.03	0.29
25	VARR	3.95	1.24	0.55	0.21	0.17	0.74	0.36	0.21	0.39	0.10	0.07	0.53
26	VARN	4.87	0.98	0.26	0.51	0.34	0.34	0.70	0.53	0.19	0.14	0.01	0.28

27	VARI	4.93	1.10	0.17	0.35	0.51	0.21	0.46	0.65	0.15	0.07	0.12	0.20
28	WOLR	4.06	1.32	0.46	0.15	0.08	0.06	0.18	0.17	0.32	0.08	0.03	0.33
29	WOLN	5.30	1.08	0.16	0.36	0.16	0.08	0.11	-0.01	0.10	0.53	0.42	0.08
30	WOLI	5.44	1.08	0.12	0.26	0.33	0.07	0.00	0.08	0.13	0.47	0.55	0.07

Table 13 continued

				11	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
		MEAN	SDEV	INSN	INSI	LOPR	LOPN	LOPI	MPUR	MPUN	MPUI	ROPR	ROPN
1	AUTR	4.04	1.23										
2	AUTN	5.04	0.95										
3	AUTI	4.81	1.04										
4	CHAR	4.43	1.33										
5	CHAN	5.15	0.99										
6	CHAI	5.24	1.07										
7	COMR	3.16	1.28										
8	COMN	4.22	1.34										
9	COMI	4.28	1.36										
10	INSR	4.46	1.28										
11	INSN	5.66	0.98	**0.87**									
12	INSI	5.97	0.93	0.68	**0.87**								
13	LOPR	4.27	1.35	0.34	0.26	**0.85**							
14	LOPN	5.53	0.96	0.68	0.53	0.49	**0.83**						
15	LOPI	5.68	0.91	0.50	0.64	0.36	0.69	**0.80**					
16	MPUR	4.37	1.38	0.31	0.24	0.70	0.35	0.30	**0.85**				
17	MPUN	5.77	1.03	0.55	0.38	0.29	0.59	0.40	0.43	**0.87**			
18	MPUI	6.02	0.95	0.37	0.46	0.25	0.39	0.50	0.30	0.68	**0.85**		
19	ROPR	3.77	1.14	0.22	0.15	0.60	0.31	0.24	0.53	0.21	0.19	**0.83**	
20	ROPN	4.47	1.09	0.35	0.26	0.22	0.37	0.29	0.19	0.24	0.11	0.48	**0.83**
21	ROPI	4.40	1.14	0.21	0.32	0.12	0.21	0.35	0.11	0.08	0.11	0.31	0.70

22	TEMR	4.98	1.27	0.40	0.28	0.64	0.43	0.34	0.57	0.36	0.29	0.50	0.17
23	TEMN	5.85	0.95	0.66	0.50	0.37	0.68	0.51	0.35	0.59	0.40	0.24	0.27
24	TEMI	6.01	0.91	0.52	0.63	0.29	0.52	0.67	0.28	0.43	0.54	0.19	0.18
25	VARR	3.95	1.24	0.28	0.18	0.63	0.30	0.23	0.58	0.24	0.17	0.55	0.24
26	VARN	4.87	0.98	0.52	0.39	0.31	0.58	0.43	0.27	0.41	0.26	0.31	0.40
27	VARI	4.93	1.10	0.33	0.46	0.25	0.38	0.51	0.18	0.20	0.30	0.26	0.28
28	WOLR	4.06	1.32	0.21	0.14	0.37	0.26	0.21	0.45	0.22	0.17	0.29	0.11
29	WOLN	5.30	1.08	0.34	0.21	0.11	0.27	0.13	0.12	0.28	0.12	0.12	0.30
30	WOLI	5.44	1.08	0.21	0.32	0.12	0.14	0.22	0.12	0.12	0.19	0.15	0.26

Table 13 continued

				21	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
		MEAN	SDEV	ROPI	TEMR	TEMN	TEMI	VARR	VARN	VARI	WOLR	WOLN	WOLI
1	AUTR	4.04	1.23										
2	AUTN	5.04	0.95										
3	AUTI	4.81	1.04										
4	CHAR	4.43	1.33										
5	CHAN	5.15	0.99										
6	CHAI	5.24	1.07										
7	COMR	3.16	1.28										
8	COMN	4.22	1.34										
9	COMI	4.28	1.36										
10	INSR	4.46	1.28										
11	INSN	5.66	0.98										
12	INSI	5.97	0.93										
13	LOPR	4.27	1.35										
14	LOPN	5.53	0.96										
15	LOPI	5.68	0.91										
16	MPUR	4.37	1.38										

17	MPUN	5.77	1.03										
18	MPUI	6.02	0.95										
19	ROPR	3.77	1.14										
20	ROPN	4.47	1.09										
21	ROPI	4.40	1.14	**0.79**									
22	TEMR	4.98	1.27	0.07	**0.89**								
23	TEMN	5.85	0.95	0.12	0.58	**0.88**							
24	TEMI	6.01	0.91	0.19	0.39	0.68	**0.89**						
25	VARR	3.95	1.24	0.16	0.51	0.26	0.21	**0.87**					
26	VARN	4.87	0.98	0.27	0.30	0.45	0.35	0.43	**0.86**				
27	VARI	4.93	1.10	0.37	0.19	0.26	0.39	0.24	0.65	**0.86**			
28	WOLR	4.06	1.32	0.05	0.26	0.20	0.18	0.28	0.22	0.12	**0.82**		
29	WOLN	5.30	1.08	0.23	0.10	0.32	0.19	0.11	0.21	0.07	0.35	**0.84**	
30	WOLI	5.44	1.08	0.37	0.08	0.18	0.23	0.08	0.08	0.20	0.20	0.70	**0.79**

Note: N = 788. Table entries are pairwise correlations. Correlations greater than .07 in absolute magnitude are statistically significant at $p < .05$. Reliabilities (omega coefficient) are in bold on the diagonal.

Table 14. Details by Item for Rewards (3-Item Survey) - Officers

	AUTR	CHAR	COMR	INSR	LOPR	MPUR	ROPR	TEMR	VARR	WOLR
AUTR3	**0.895**	-0.028	0.100	-0.006	-0.095	-0.011	0.045	-0.062	-0.063	0.048
AUTR4	**0.929**	-0.048	-0.016	-0.081	-0.103	-0.068	-0.059	-0.058	-0.045	0.018
AUTR5	**0.943**	0.064	-0.056	0.082	0.165	0.072	0.024	0.097	0.086	-0.051
CHAR3	-0.201	**0.823**	-0.047	-0.082	-0.108	-0.030	-0.098	-0.071	-0.103	-0.108
CHAR4	0.098	**0.897**	0.081	0.119	0.030	0.112	0.125	0.056	0.019	0.096
CHAR5	0.057	**0.899**	-0.047	-0.059	0.058	-0.092	-0.053	-0.003	0.067	-0.017
COMR2	0.044	0.044	**0.807**	-0.012	0.054	0.010	-0.001	0.068	0.032	-0.049
COMR3	-0.094	-0.058	**0.951**	-0.047	-0.101	-0.074	-0.096	-0.086	-0.052	-0.038
COMR5	0.133	0.039	**0.547**	0.181	0.146	0.215	0.251	0.037	0.052	0.269
INSR2	0.009	-0.057	-0.047	**0.875**	-0.026	-0.070	0.068	0.068	-0.048	-0.008
INSR3	-0.058	0.049	-0.004	**0.900**	-0.009	0.005	-0.219	-0.050	0.001	-0.106
INSR5	0.053	0.000	0.049	**0.886**	0.032	0.059	0.164	-0.009	0.044	0.118
LOPR1	-0.042	-0.101	-0.082	0.033	**0.844**	0.160	-0.018	-0.062	-0.117	-0.036
LOPR3	-0.101	0.227	0.113	0.009	**0.837**	0.049	0.067	-0.007	0.124	-0.028
LOPR5	0.115	-0.091	-0.015	-0.039	**0.906**	-0.182	-0.038	0.058	0.007	0.048
MPUR1	0.019	-0.190	-0.129	-0.044	-0.099	**0.800**	-0.083	-0.038	-0.142	0.061
MPUR2	-0.077	0.071	0.040	-0.060	-0.023	**0.801**	-0.119	-0.113	0.024	-0.146
MPUR4	0.057	0.140	0.106	0.112	0.134	**0.801**	0.213	0.156	0.133	0.079
ROPR2	-0.050	0.093	0.076	0.012	0.149	0.231	**0.857**	0.074	0.038	0.003
ROPR3	0.007	-0.010	-0.105	-0.032	-0.035	-0.117	**0.924**	-0.033	-0.024	-0.044
ROPR4	0.033	-0.059	0.048	0.022	-0.076	-0.053	**0.912**	-0.023	-0.003	0.044
TEMR2	-0.120	-0.062	-0.095	-0.140	-0.032	-0.054	-0.089	**0.806**	-0.088	-0.068
TEMR4	-0.059	-0.008	0.014	-0.071	-0.106	-0.052	-0.056	**0.922**	-0.001	-0.005
TEMR5	0.153	0.054	0.051	0.181	0.137	0.096	0.125	**0.900**	0.066	0.055
VARR2	0.155	-0.083	0.095	0.268	0.022	0.134	0.170	0.083	**0.701**	0.124
VARR4	-0.078	0.120	-0.036	-0.068	-0.052	0.048	-0.015	-0.043	**0.897**	-0.033
VARR5	0.005	-0.064	-0.007	-0.056	0.047	-0.116	-0.066	0.008	**0.903**	-0.021
WOLR1	-0.074	-0.224	-0.080	-0.044	-0.231	-0.230	-0.044	-0.141	-0.184	**0.781**

WOLR3	0.020	0.049	-0.021	0.042	0.062	0.029	-0.005	-0.027	-0.003	**0.909**
WOLR4	0.036	0.103	0.081	-0.015	0.097	0.132	0.039	0.131	0.133	**0.877**

Table 14 continued

	OMEGA	ITEM	PRIMARY	CROSS-LOADINGS	
				ABS AVG	ABS MAX
AUTR3	**0.945**	**AUTR3**	**0.895**	0.051	0.100
AUTR4		**AUTR4**	**0.929**	0.055	0.103
AUTR5		**AUTR5**	**0.943**	0.077	0.165
CHAR3	**0.906**	**CHAR3**	**0.823**	0.094	0.201
CHAR4		**CHAR4**	**0.897**	0.082	0.125
CHAR5		**CHAR5**	**0.899**	0.050	0.092
COMR2	**0.823**	**COMR2**	**0.807**	0.035	0.068
COMR3		**COMR3**	**0.951**	0.072	0.101
COMR5		**COMR5**	**0.547**	0.147	0.269
INSR2	**0.917**	**INSR2**	**0.875**	0.045	0.070
INSR3		**INSR3**	**0.900**	0.056	0.219
INSR5		**INSR5**	**0.886**	0.059	0.164
LOPR1	**0.897**	**LOPR1**	**0.844**	0.072	0.160
LOPR3		**LOPR3**	**0.837**	0.081	0.227
LOPR5		**LOPR5**	**0.906**	0.066	0.182
MPUR1	**0.843**	**MPUR1**	**0.800**	0.089	0.190
MPUR2		**MPUR2**	**0.801**	0.075	0.146
MPUR4		**MPUR4**	**0.801**	0.126	0.213
ROPR2	**0.926**	**ROPR2**	**0.857**	0.081	0.231
ROPR3		**ROPR3**	**0.924**	0.045	0.117
ROPR4		**ROPR4**	**0.912**	0.040	0.076
TEMR2	**0.909**	**TEMR2**	**0.806**	0.083	0.140
TEMR4		**TEMR4**	**0.922**	0.041	0.106
TEMR5		**TEMR5**	**0.900**	0.102	0.181

VARR2	**0.876**	**VARR2**	**0.701**	0.126	0.268
VARR4		**VARR4**	**0.897**	0.055	0.120
VARR5		**VARR5**	**0.903**	0.043	0.116
WOLR1	**0.892**	**WOLR1**	**0.781**	0.139	0.231
WOLR3		**WOLR3**	**0.909**	0.029	0.062
WOLR4		**WOLR4**	**0.877**	0.085	0.133

Note: Primary loadings are shown in bold on the diagonal. Cross-loadings that are underlined are significant at the $p < .05$ level. Average and maximum cross-loadings are absolute values.

Table 15. Details by Item for Needs (3-Item Survey) - Officers

	AUTN	CHAN	COMN	INSN	LOPN	MPUN	ROPN	TEMN	VARN	WOLN
AUTN3	**0.825**	-0.036	-0.015	-0.078	-0.120	-0.056	-0.034	-0.123	-0.051	0.036
AUTN4	**0.914**	-0.031	-0.042	-0.017	-0.007	0.058	-0.005	-0.008	-0.039	-0.013
AUTN5	**0.876**	0.062	0.057	0.082	0.106	-0.018	0.033	0.108	0.083	-0.019
CHAN3	-0.059	**0.859**	-0.060	0.042	0.008	-0.014	0.022	0.038	-0.133	-0.089
CHAN4	0.089	**0.838**	0.062	0.069	0.144	0.099	-0.007	0.075	0.036	0.110
CHAN5	-0.022	**0.893**	0.002	-0.093	-0.138	-0.074	-0.015	-0.100	0.094	-0.009
COMN2	-0.059	0.037	**0.840**	0.020	0.021	0.033	-0.087	0.025	0.028	0.010
COMN3	0.078	0.023	**0.873**	0.064	0.048	-0.015	0.059	0.020	0.008	-0.049
COMN5	-0.030	-0.098	**0.672**	-0.133	-0.109	-0.032	0.043	-0.074	-0.057	0.050
INSN2	-0.052	0.030	0.025	**0.693**	0.044	0.009	0.083	0.135	0.054	-0.021
INSN3	-0.029	0.066	-0.106	**0.809**	0.051	0.050	-0.075	-0.159	0.036	-0.032
INSN5	0.070	-0.094	0.085	**0.801**	-0.109	-0.063	0.011	0.037	-0.085	0.046
LOPN1	-0.015	0.070	-0.030	0.023	**0.800**	0.133	-0.017	-0.096	-0.080	-0.008
LOPN3	0.133	0.189	0.046	-0.046	**0.800**	-0.092	0.011	-0.134	0.063	0.100
LOPN5	-0.107	-0.212	-0.009	0.012	**0.850**	-0.025	0.006	0.220	0.026	-0.084
MPUN1	-0.052	-0.150	0.006	-0.035	-0.110	**0.780**	-0.083	-0.150	-0.195	0.036
MPUN2	-0.095	-0.119	-0.070	-0.167	-0.106	**0.824**	-0.035	-0.029	-0.076	-0.128
MPUN4	0.156	0.271	0.069	0.210	0.223	**0.793**	0.122	0.179	0.270	0.101
ROPN2	0.000	-0.001	0.161	0.029	0.056	0.010	**0.822**	0.042	0.011	0.110
ROPN3	0.021	-0.016	-0.065	-0.031	-0.043	-0.031	**0.931**	-0.064	-0.016	-0.048
ROPN4	-0.021	0.017	-0.032	0.015	0.010	0.028	**0.919**	0.040	0.010	-0.016
TEMN2	-0.066	-0.014	-0.034	-0.113	-0.029	0.029	0.002	**0.856**	-0.002	-0.064
TEMN4	0.030	-0.039	0.004	0.021	-0.091	-0.038	0.027	**0.906**	-0.051	0.031
TEMN5	0.028	0.055	0.027	0.085	0.125	0.015	-0.033	**0.876**	0.058	0.026
VARN2	-0.051	-0.121	0.040	-0.002	-0.068	0.150	0.110	-0.058	**0.726**	0.027
VARN4	0.089	-0.087	-0.016	-0.030	-0.079	-0.062	0.023	-0.071	**0.891**	0.042
VARN5	-0.062	0.166	-0.003	0.027	0.114	-0.015	-0.074	0.096	**0.933**	-0.052
WOLN1	-0.061	-0.130	0.034	-0.103	-0.137	-0.103	0.011	-0.131	-0.107	**0.712**

WOLN3	0.031	0.035	-0.049	0.054	0.059	0.046	-0.009	0.031	0.005	**0.903**
WOLN4	0.007	0.047	0.034	0.011	0.026	0.020	0.003	0.053	0.066	**0.836**

Table 15 continued

	OMEGA	ITEM	PRIMARY	CROSS-LOADINGS	
				ABS AVG	ABS MAX
AUTN3	**0.905**	**AUTN3**	**0.825**	0.061	0.123
AUTN4		**AUTN4**	**0.914**	0.024	0.058
AUTN5		**AUTN5**	**0.876**	0.063	0.108
CHAN3	**0.898**	**CHAN3**	**0.859**	0.052	0.133
CHAN4		**CHAN4**	**0.838**	0.077	0.144
CHAN5		**CHAN5**	**0.893**	0.061	0.138
COMN2	**0.840**	**COMN2**	**0.840**	0.036	0.087
COMN3		**COMN3**	**0.873**	0.040	0.078
COMN5		**COMN5**	**0.672**	0.070	0.133
INSN2	**0.813**	**INSN2**	**0.693**	0.050	0.135
INSN3		**INSN3**	**0.809**	0.067	0.159
INSN5		**INSN5**	**0.801**	0.067	0.109
LOPN1	**0.858**	**LOPN1**	**0.800**	0.052	0.133
LOPN3		**LOPN3**	**0.800**	0.090	0.189
LOPN5		**LOPN5**	**0.850**	0.078	0.220
MPUN1	**0.841**	**MPUN1**	**0.780**	0.091	0.195
MPUN2		**MPUN2**	**0.824**	0.092	0.167
MPUN4		**MPUN4**	**0.793**	0.178	0.271
ROPN2	**0.921**	**ROPN2**	**0.822**	0.047	0.161
ROPN3		**ROPN3**	**0.931**	0.037	0.065
ROPN4		**ROPN4**	**0.919**	0.021	0.040
TEMN2	**0.911**	**TEMN2**	**0.856**	0.039	0.113
TEMN4		**TEMN4**	**0.906**	0.037	0.091
TEMN5		**TEMN5**	**0.876**	0.050	0.125

VARN2	**0.889**	**VARN2**	**0.726**	0.070	0.150
VARN4		**VARN4**	**0.891**	0.055	0.089
VARN5		**VARN5**	**0.933**	0.068	0.166
WOLN1	**0.860**	**WOLN1**	**0.712**	0.091	0.137
WOLN3		**WOLN3**	**0.903**	0.035	0.059
WOLN4		**WOLN4**	**0.836**	0.030	0.066

Note: Primary loadings are shown in bold on the diagonal. Cross-loadings that are underlined are significant at the $p < .05$ level. Average and maximum cross-loadings are absolute values.

Table 16. Details by Item for Importance (3-Item Survey) - Officers

	AUTI	CHAI	COMI	INSI	LOPI	MPUI	ROPI	TEMI	VARI	WOLI
AUTI3	**0.778**	-0.046	-0.076	-0.152	-0.187	-0.051	-0.041	-0.158	-0.071	0.007
AUTI4	**0.795**	0.151	0.085	0.169	0.168	0.092	0.070	0.103	0.048	0.108
AUTI5	**0.914**	-0.091	-0.009	-0.022	0.007	-0.035	-0.025	0.036	0.018	-0.091
CHAI3	-0.120	**0.818**	-0.104	-0.081	-0.084	0.110	-0.084	-0.001	-0.188	-0.071
CHAI4	0.060	**0.810**	0.127	0.066	0.274	0.070	0.009	0.168	-0.148	0.196
CHAI5	0.051	**0.892**	-0.017	0.015	-0.169	-0.152	0.063	-0.142	0.293	-0.099
COMI2	-0.019	0.037	**0.899**	0.045	0.026	0.003	-0.032	0.005	0.056	-0.063
COMI3	0.001	-0.042	**0.965**	-0.043	-0.035	0.010	-0.018	0.000	-0.072	0.049
COMI5	0.076	0.020	**0.563**	-0.006	0.039	-0.058	0.198	-0.023	0.066	0.053
INSI2	-0.001	0.065	-0.050	**0.746**	0.063	0.038	0.059	0.046	0.052	-0.015
INSI3	-0.088	-0.052	-0.046	**0.900**	-0.210	-0.057	-0.040	-0.214	-0.051	0.026
INSI5	0.112	-0.003	0.114	**0.726**	0.153	0.030	-0.011	0.202	0.010	-0.017
LOPI1	-0.162	0.094	-0.206	0.103	**0.659**	0.234	-0.206	0.135	-0.113	-0.026
LOPI3	0.154	-0.115	0.189	0.046	**0.685**	-0.192	0.304	-0.066	0.080	0.094
LOPI5	-0.004	0.028	0.002	-0.128	**0.845**	-0.027	-0.097	-0.059	0.024	-0.063
MPUI1	-0.061	-0.096	0.041	0.059	-0.025	**0.773**	-0.066	-0.050	-0.169	0.077
MPUI2	0.002	-0.097	-0.048	-0.106	-0.094	**0.806**	-0.009	-0.003	0.044	-0.083
MPUI4	0.053	0.183	0.011	0.048	0.114	**0.818**	0.068	0.050	0.110	0.012
ROPI2	0.088	0.119	0.176	0.109	0.163	0.077	**0.680**	0.131	0.080	0.083
ROPI3	0.018	-0.054	0.005	0.005	-0.038	0.006	**0.957**	-0.062	-0.038	0.055
ROPI4	-0.051	0.016	-0.070	-0.044	-0.018	-0.032	**0.902**	0.020	0.011	-0.086
TEMI2	-0.021	0.008	-0.045	0.005	0.039	0.143	-0.093	**0.841**	0.008	0.087
TEMI4	-0.046	-0.014	0.003	-0.075	-0.117	-0.074	0.001	**0.912**	-0.072	-0.043
TEMI5	0.073	0.008	0.038	0.080	0.089	-0.046	0.085	**0.862**	0.074	-0.029
VARI2	-0.062	-0.072	0.148	0.147	0.098	0.099	0.097	0.103	**0.617**	0.074
VARI4	0.055	0.153	-0.026	0.083	0.134	0.038	0.011	0.058	**0.865**	-0.032
VARI5	-0.026	-0.121	-0.029	-0.137	-0.180	-0.072	-0.047	-0.097	**0.945**	0.004
WOLI1	-0.078	-0.050	0.037	0.014	-0.057	-0.018	0.002	-0.034	-0.038	**0.708**

WOLI3	0.114	-0.040	0.104	-0.030	-0.009	-0.062	0.100	-0.031	0.021	**0.771**
WOLI4	-0.044	0.068	-0.126	0.016	0.046	0.066	-0.087	0.049	0.008	**0.915**

Table 16 continued

	OMEGA	ITEM	PRIMARY	CROSS-LOADINGS	
				ABS AVG	ABS MAX
AUTI3	**0.870**	**AUTI3**	**0.778**	0.088	0.187
AUTI4		**AUTI4**	**0.795**	0.110	0.169
AUTI5		**AUTI5**	**0.914**	0.037	0.091
CHAI3	**0.878**	**CHAI3**	**0.818**	0.094	0.188
CHAI4		**CHAI4**	**0.810**	0.124	0.274
CHAI5		**CHAI5**	**0.892**	0.111	0.293
COMI2	**0.862**	**COMI2**	**0.899**	0.032	0.063
COMI3		**COMI3**	**0.965**	0.030	0.072
COMI5		**COMI5**	**0.563**	0.060	0.198
INSI2	**0.836**	**INSI2**	**0.746**	0.043	0.065
INSI3		**INSI3**	**0.900**	0.087	0.214
INSI5		**INSI5**	**0.726**	0.072	0.202
LOPI1	**0.776**	**LOPI1**	**0.659**	0.142	0.234
LOPI3		**LOPI3**	**0.685**	0.138	0.304
LOPI5		**LOPI5**	**0.845**	0.048	0.128
MPUI1	**0.841**	**MPUI1**	**0.773**	0.072	0.169
MPUI2		**MPUI2**	**0.806**	0.054	0.106
MPUI4		**MPUI4**	**0.818**	0.072	0.183
ROPI2	**0.889**	**ROPI2**	**0.680**	0.114	0.176
ROPI3		**ROPI3**	**0.957**	0.031	0.062
ROPI4		**ROPI4**	**0.902**	0.039	0.086
TEMI2	**0.905**	**TEMI2**	**0.841**	0.050	0.143
TEMI4		**TEMI4**	**0.912**	0.049	0.117

TEMI5		**TEMI5**	**0.862**	0.058	0.089
VARI2	**0.858**	**VARI2**	**0.617**	0.100	0.148
VARI4		**VARI4**	**0.865**	0.066	0.153
VARI5		**VARI5**	**0.945**	0.079	0.180
WOLI1	**0.843**	**WOLI1**	**0.708**	0.036	0.078
WOLI3		**WOLI3**	**0.771**	0.057	0.114
WOLI4		**WOLI4**	**0.915**	0.057	0.126

Note: Primary loadings are shown in bold on the diagonal. Cross-loadings that are underlined are significant at the $p < .05$ level. Average and maximum cross-loadings are absolute values.

Table 17. Details by Item for Outcomes - Officers

						OMEGA	ITEM	PRIMARY	CROSS-LOADINGS	
	SATO	OIDO	INRO	HELO	VOCO				ABS AVG	ABS MAX
SATO1	**0.908**	0.024	0.050	0.028	0.042	**0.950**	**SATO1**	**0.908**	0.036	0.050
SATO2	**0.941**	-0.017	0.054	0.041	0.038		**SATO2**	**0.941**	0.038	0.054
SATO3	**0.940**	-0.002	-0.094	-0.065	-0.072		**SATO3**	**0.940**	0.058	0.094
OIDO1	-0.231	**0.661**	-0.046	-0.286	-0.288	**0.861**	**OIDO1**	**0.661**	0.213	0.288
OIDO2	0.169	**0.669**	0.228	0.402	0.419		**OIDO2**	**0.669**	0.305	0.419
OIDO3	0.149	**0.595**	0.158	0.407	0.322		**OIDO3**	**0.595**	0.259	0.407
OIDO4	-0.141	**0.828**	-0.130	-0.261	-0.265		**OIDO4**	**0.828**	0.199	0.265
OIDO5	0.046	**0.705**	0.021	0.069	0.094		**OIDO5**	**0.705**	0.058	0.094
OIDO6	0.076	**0.805**	-0.071	-0.076	-0.049		**OIDO6**	**0.805**	0.068	0.076
INRO1	0.070	0.062	**0.782**	0.049	0.071	**0.877**	**INRO1**	**0.782**	0.063	0.071
INRO2	0.046	-0.043	**0.828**	-0.066	-0.061		**INRO2**	**0.828**	0.054	0.066
INRO3	0.045	0.042	**0.770**	0.159	0.139		**INRO3**	**0.770**	0.096	0.159
INRO4	-0.146	-0.045	**0.821**	-0.114	-0.121		**INRO4**	**0.821**	0.107	0.146
HELO1	-0.165	-0.173	-0.021	**0.529**	0.009	**0.834**	**HELO1**	**0.529**	0.087	0.173
HELO2	0.105	0.108	-0.139	**0.666**	0.007		**HELO2**	**0.666**	0.055	0.108
HELO3	-0.017	-0.130	0.112	**0.685**	-0.173		**HELO3**	**0.685**	0.108	0.173
HELO4	0.051	-0.090	0.035	**0.785**	0.239		**HELO4**	**0.785**	0.104	0.239
HELO5	-0.152	0.074	-0.053	**0.683**	0.154		**HELO5**	**0.683**	0.108	0.154
HELO6	0.112	0.184	0.044	**0.693**	-0.229		**HELO6**	**0.693**	0.142	0.229
VOCO1	0.172	-0.014	0.107	0.072	**0.591**	**0.848**	**VOCO1**	**0.591**	0.091	0.172
VOCO2	-0.104	-0.216	0.007	-0.310	**0.740**		**VOCO2**	**0.740**	0.159	0.310
VOCO3	-0.020	0.240	-0.075	-0.143	**0.741**		**VOCO3**	**0.741**	0.120	0.240
VOCO4	0.041	-0.130	0.045	-0.272	**0.697**		**VOCO4**	**0.697**	0.122	0.272
VOCO5	-0.021	-0.199	-0.004	-0.046	**0.724**		**VOCO5**	**0.724**	0.068	0.199
VOCO6	-0.007	0.355	-0.051	**0.778**	**0.665**		**VOCO6**	**0.665**	0.298	0.778

Note: Primary loadings are shown in bold on the diagonal. Cross-loadings that are underlined are significant at the $p < .05$ level. Average and maximum cross-loadings are absolute values. There is one cross-loading that is greater than the primary loading. The item, VOCO6, is loading onto the Helping dimension greater than Voice.

Table 18. Officer Needs-Rewards Survey, Results of Confirmatory Factor Analysis Tests for Model Fit

10 Factor Models					5 Factor Model				
Rewards (REW) 10 Factors		MFF c^2	df	N	**Outcomes (OUT) 5 Factors**		MFF c^2	df	N
	Null Model	8823.92	435	349		Null Model	5602.608	300	349
	Target Model	611.886	360			Target Model	911.156	265	
	RMSEA	0.045				RMSEA	0.084		
	SRMR	0.045				SRMR	0.069		
	CFI	0.970				CFI	0.878		
Needs (NED) 10 Factors		MFF c^2	df	N					
	Null Model	7665.97	435	349					
	Target Model	678.417	360		**35 Factor Model**				
					FULL MODEL with REW, NED, IMP & OUT		MFF c^2	df	N
	RMSEA	0.050				Null Model	40878.050	6555	349
	SRMR	0.046				Target Model	9609.508	5755	
	CFI	0.956							
Importance (IMP) 10 Factors		MFF c^2	df	N		CFI	0.888		
	Null Model	7186.455	435	349		RMSEA	0.044		
	Target Model	969.135	360						
	RMSEA	0.070							
	SRMR	0.061							
	CFI	0.910							

Note: Chi-Square for model (c2). MFF, Minimum Fit Function. CFI Comparative Fit Index; >.95 (Hu & Bentler, 1999). RMSEA, Root Mean Squared Error of Approximation; <.06 (Hu & Bentler, 1999). SRMR, Standardized Root Mean Square Residual; <.08 (Hu & Bentler, 1999).

Table 19. PHI Matrix, Correlations of Factors in the 3 Item, 10 Dimension Model (35-Factors)

				1	2	3	4	5	6	7	8	9	10	11	12
		MEAN	SDEV	AUTR	AUTN	AUTI	CHAR	CHAN	CHAI	COMR	COMN	COMI	INSR	INSN	INSI
1	AUTR	4.56	1.32	1.00											
2	AUTN	5.32	0.96	0.50	1.00										
3	AUTI	5.25	1.06	0.23	0.71	1.00									
4	CHAR	4.94	1.19	0.44	0.39	0.19	1.00								
5	CHAN	5.16	0.94	0.40	0.48	0.33	0.39	1.00							
6	CHAI	5.27	1.06	0.27	0.32	0.41	0.19	0.86	1.00						
7	COMR	4.14	0.92	0.35	0.25	0.11	0.31	0.20	0.06	1.00					
8	COMN	4.84	0.99	0.14	0.38	0.22	0.08	0.18	0.10	0.21	1.00				
9	COMI	5.03	1.12	0.05	0.19	0.27	0.01	0.01	0.04	0.01	0.70	1.00			
10	INSR	4.29	1.40	0.60	0.25	0.01	0.38	0.37	0.22	0.39	0.10	0.02	1.00		
11	INSN	5.62	0.84	0.29	0.43	0.22	0.30	0.53	0.40	0.21	0.28	0.12	0.34	1.00	
12	INSI	5.95	0.84	0.21	0.26	0.31	0.22	0.37	0.43	0.13	0.11	0.20	0.16	0.68	1.00
13	LOPR	4.69	1.26	0.61	0.41	0.19	0.65	0.48	0.29	0.27	0.13	0.08	0.50	0.35	0.21
14	LOPN	5.29	0.93	0.46	0.52	0.37	0.39	0.80	0.65	0.19	0.31	0.17	0.40	0.69	0.48
15	LOPI	5.43	0.92	0.27	0.34	0.49	0.31	0.64	0.71	0.09	0.12	0.20	0.23	0.52	0.64
16	MPUR	4.50	1.18	0.41	0.28	0.07	0.53	0.41	0.27	0.24	0.04	-0.04	0.49	0.23	0.20
17	MPUN	5.16	1.00	0.18	0.27	0.11	0.32	0.45	0.40	0.14	0.14	-0.04	0.17	0.45	0.29
18	MPUI	5.54	1.03	0.05	0.10	0.12	0.23	0.27	0.39	0.09	0.03	0.08	0.00	0.25	0.35
19	ROPR	3.94	1.29	0.59	0.28	0.06	0.33	0.31	0.22	0.46	0.10	-0.01	0.69	0.30	0.14
20	ROPN	4.33	1.19	0.24	0.22	0.25	0.23	0.20	0.15	0.15	0.37	0.25	0.22	0.21	0.20
21	ROPI	4.57	1.29	0.10	0.16	0.33	0.14	0.06	0.11	-0.01	0.24	0.34	0.07	0.11	0.30
22	TEMR	4.92	1.10	0.51	0.38	0.21	0.51	0.43	0.27	0.29	0.21	0.18	0.49	0.30	0.19
23	TEMN	5.34	0.97	0.32	0.40	0.28	0.37	0.50	0.42	0.18	0.23	0.14	0.37	0.62	0.43
24	TEMI	5.50	1.05	0.19	0.21	0.30	0.29	0.44	0.52	0.05	0.07	0.12	0.21	0.40	0.51
25	VARR	4.71	1.17	0.57	0.43	0.22	0.80	0.37	0.19	0.39	0.14	0.01	0.36	0.28	0.16
26	VARN	4.96	0.96	0.50	0.59	0.48	0.42	0.76	0.58	0.28	0.29	0.15	0.39	0.40	0.24

27	VARI	4.87	1.17	0.26	0.41	0.60	0.23	0.47	0.62	0.11	0.19	0.21	0.22	0.22	0.31
28	WOLR	4.33	1.26	0.51	0.18	-0.01	0.05	0.17	0.10	0.42	0.09	0.01	0.41	0.13	0.08
29	WOLN	5.45	0.90	0.09	0.41	0.20	0.03	0.06	-0.02	0.19	0.57	0.40	0.03	0.33	0.11
30	WOLI	5.87	0.97	0.00	0.18	0.23	0.00	-0.08	-0.05	0.09	0.34	0.51	-0.09	0.09	0.22
31	SATO	1.37	1.48	0.53	0.09	-0.01	0.38	0.30	0.20	0.26	-0.11	-0.12	0.60	0.18	0.17
32	OIDO	1.65	1.10	0.33	0.10	0.08	0.30	0.34	0.29	0.13	0.04	0.05	0.46	0.32	0.34
33	INRO	2.30	0.76	0.20	0.18	0.10	0.07	0.28	0.24	0.05	0.09	0.13	0.25	0.32	0.24
34	HELO	1.86	0.77	0.32	0.27	0.14	0.37	0.50	0.42	0.14	0.03	0.02	0.40	0.45	0.42
35	VOCO	1.92	0.83	0.41	0.27	0.18	0.38	0.49	0.37	0.15	0.13	0.11	0.44	0.42	0.36

Table 19 continued

				13	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
		MEAN	SDEV	LOPR	LOPN	LOPI	MPUR	MPUN	MPUI	ROPR	ROPN	ROPI	TEMR	TEMN	TEMI
1	AUTR	4.56	1.32												
2	AUTN	5.32	0.96												
3	AUTI	5.25	1.06												
4	CHAR	4.94	1.19												
5	CHAN	5.16	0.94												
6	CHAI	5.27	1.06												
7	COMR	4.14	0.92												
8	COMN	4.84	0.99												
9	COMI	5.03	1.12												
10	INSR	4.29	1.40												
11	INSN	5.62	0.84												
12	INSI	5.95	0.84												
13	LOPR	4.69	1.26	1.00											
14	LOPN	5.29	0.93	0.61	1.00										
15	LOPI	5.43	0.92	0.34	0.79	1.00									
16	MPUR	4.50	1.18	0.64	0.42	0.34	1.00								

17	MPUN	5.16	1.00	0.29	0.52	0.43	0.49	1.00							
18	MPUI	5.54	1.03	0.16	0.33	0.47	0.31	0.83	1.00						
19	ROPR	3.94	1.29	0.48	0.33	0.18	0.41	0.19	0.02	1.00					
20	ROPN	4.33	1.19	0.27	0.27	0.23	0.20	0.12	0.03	0.30	1.00				
21	ROPI	4.57	1.29	0.12	0.11	0.28	0.10	-0.01	0.03	0.14	0.84	1.00			
22	TEMR	4.92	1.10	0.61	0.48	0.34	0.48	0.25	0.13	0.46	0.16	0.05	1.00		
23	TEMN	5.34	0.97	0.41	0.69	0.59	0.34	0.47	0.34	0.26	0.13	0.04	0.63	1.00	
24	TEMI	5.50	1.05	0.24	0.52	0.70	0.22	0.39	0.45	0.18	0.06	0.11	0.47	0.82	1.00
25	VARR	4.71	1.17	0.59	0.34	0.24	0.45	0.28	0.14	0.39	0.18	0.05	0.44	0.34	0.16
26	VARN	4.96	0.96	0.48	0.66	0.51	0.37	0.38	0.14	0.35	0.31	0.14	0.44	0.48	0.37
27	VARI	4.87	1.17	0.24	0.39	0.49	0.21	0.25	0.22	0.19	0.27	0.27	0.25	0.28	0.39
28	WOLR	4.33	1.26	0.24	0.18	0.09	0.34	0.25	0.13	0.47	0.07	-0.03	0.37	0.11	0.09
29	WOLN	5.45	0.90	0.07	0.17	0.01	0.09	0.24	0.13	0.09	0.10	0.01	0.14	0.15	0.04
30	WOLI	5.87	0.97	-0.06	0.03	0.13	-0.02	0.13	0.33	-0.08	0.06	0.15	0.08	0.09	0.09
31	SATO	1.37	1.48	0.49	0.32	0.23	0.50	0.17	0.08	0.46	0.10	-0.01	0.40	0.21	0.18
32	OIDO	1.65	1.10	0.43	0.46	0.35	0.42	0.16	0.14	0.37	0.29	0.24	0.26	0.31	0.30
33	INRO	2.30	0.76	0.23	0.35	0.21	0.17	0.12	0.02	0.14	0.05	0.01	0.20	0.22	0.10
34	HELO	1.86	0.77	0.47	0.60	0.47	0.53	0.33	0.26	0.26	0.09	0.05	0.32	0.37	0.32
35	VOCO	1.92	0.83	0.55	0.62	0.43	0.47	0.23	0.12	0.33	0.23	0.14	0.35	0.31	0.24

Table 19 continued

				25	26	27	28	29	30	31	32	33	34	35
		MEAN	SDEV	VARR	VARN	VARI	WOLR	WOLN	WOLI	SATO	OIDO	INRO	HELO	VOCO
1	AUTR	4.56	1.32											
2	AUTN	5.32	0.96											
3	AUTI	5.25	1.06											
4	CHAR	4.94	1.19											
5	CHAN	5.16	0.94											
6	CHAI	5.27	1.06											
7	COMR	4.14	0.92											
8	COMN	4.84	0.99											
9	COMI	5.03	1.12											
10	INSR	4.29	1.40											
11	INSN	5.62	0.84											
12	INSI	5.95	0.84											
13	LOPR	4.69	1.26											
14	LOPN	5.29	0.93											
15	LOPI	5.43	0.92											
16	MPUR	4.50	1.18											
17	MPUN	5.16	1.00											
18	MPUI	5.54	1.03											
19	ROPR	3.94	1.29											
20	ROPN	4.33	1.19											
21	ROPI	4.57	1.29											
22	TEMR	4.92	1.10											
23	TEMN	5.34	0.97											
24	TEMI	5.50	1.05											
25	VARR	4.71	1.17	1.00										
26	VARN	4.96	0.96	0.44	1.00									

27	VARI	4.87	1.17	0.23	0.75	1.00								
28	WOLR	4.33	1.26	0.18	0.23	0.12	1.00							
29	WOLN	5.45	0.90	0.10	0.13	0.06	0.35	1.00						
30	WOLI	5.87	0.97	-0.04	-0.04	0.04	0.20	0.69	1.00					
31	SATO	1.37	1.48	0.30	0.27	0.18	0.45	-0.12	-0.11	1.00				
32	OIDO	1.65	1.10	0.14	0.29	0.22	0.29	-0.07	-0.11	0.54	1.00			
33	INRO	2.30	0.76	0.07	0.17	0.08	0.17	0.10	0.01	0.29	0.33	1.00		
34	HELO	1.86	0.77	0.26	0.35	0.26	0.20	0.02	-0.10	0.56	0.71	0.59	1.00	
35	VOCO	1.92	0.83	0.25	0.40	0.26	0.22	0.01	-0.05	0.53	0.66	0.59	0.86	1.00

Note: N = 349. Table entries are factor correlations. Correlations greater than .12 in absolute magnitude are statistically significant at $p < .05$. All correlations are significantly less than 1.00 at $p < .05$.

Table 20. Pairwise Correlations of Factors in the 3 Item, 10 Dimension Model (35-Factors)

				1	2	3	4	5	6	7	8	9	10	11	12
		MEAN	SDEV	AUTR	AUTN	AUTI	CHAR	CHAN	CHAI	COMR	COMN	COMI	INSR	INSN	INSI
1	AUTR	4.56	1.32	**0.94**											
2	AUTN	5.32	0.96	0.49	**0.90**										
3	AUTI	5.25	1.06	0.22	0.66	**0.87**									
4	CHAR	4.94	1.19	0.40	0.36	0.18	**0.91**								
5	CHAN	5.16	0.94	0.40	0.43	0.29	0.40	**0.90**							
6	CHAI	5.27	1.06	0.24	0.28	0.36	0.17	0.77	**0.88**						
7	COMR	4.14	0.92	0.33	0.23	0.11	0.26	0.20	0.10	**0.84**					
8	COMN	4.84	0.99	0.09	0.32	0.20	0.05	0.14	0.07	0.26	**0.83**				
9	COMI	5.03	1.12	0.03	0.18	0.24	0.02	0.03	0.04	0.04	0.71	**0.86**			
10	INSR	4.29	1.40	0.56	0.23	0.00	0.34	0.34	0.21	0.35	0.06	0.01	**0.92**		
11	INSN	5.62	0.84	0.25	0.36	0.19	0.27	0.46	0.34	0.13	0.19	0.11	0.32	**0.81**	
12	INSI	5.95	0.84	0.18	0.23	0.29	0.21	0.32	0.36	0.11	0.08	0.18	0.15	0.58	**0.83**
13	LOPR	4.69	1.26	0.55	0.37	0.17	0.59	0.45	0.25	0.25	0.11	0.09	0.46	0.32	0.20
14	LOPN	5.29	0.93	0.40	0.47	0.32	0.35	0.71	0.56	0.16	0.24	0.16	0.36	0.59	0.42
15	LOPI	5.43	0.92	0.21	0.30	0.40	0.26	0.55	0.61	0.08	0.09	0.18	0.20	0.44	0.54
16	MPUR	4.50	1.18	0.37	0.24	0.05	0.47	0.40	0.26	0.23	0.04	0.01	0.44	0.22	0.17
17	MPUN	5.16	1.00	0.16	0.23	0.09	0.29	0.41	0.36	0.14	0.11	-0.02	0.15	0.38	0.24
18	MPUI	5.54	1.03	0.04	0.08	0.10	0.21	0.25	0.36	0.09	0.01	0.05	0.00	0.21	0.31
19	ROPR	3.94	1.29	0.55	0.26	0.04	0.30	0.27	0.19	0.43	0.07	0.00	0.64	0.26	0.11
20	ROPN	4.33	1.19	0.22	0.19	0.19	0.20	0.19	0.12	0.17	0.35	0.28	0.21	0.20	0.18
21	ROPI	4.57	1.29	0.11	0.15	0.30	0.13	0.08	0.11	0.00	0.24	0.38	0.06	0.12	0.30
22	TEMR	4.92	1.10	0.46	0.34	0.18	0.45	0.39	0.25	0.23	0.14	0.18	0.43	0.26	0.17
23	TEMN	5.34	0.97	0.30	0.37	0.24	0.34	0.46	0.37	0.16	0.17	0.12	0.34	0.54	0.39
24	TEMI	5.50	1.05	0.17	0.18	0.26	0.27	0.40	0.47	0.06	0.04	0.10	0.19	0.37	0.48
25	VARR	4.71	1.17	0.52	0.40	0.20	0.70	0.39	0.19	0.32	0.11	0.03	0.35	0.27	0.14
26	VARN	4.96	0.96	0.46	0.51	0.40	0.38	0.66	0.50	0.29	0.24	0.16	0.37	0.34	0.21

27	VARI	4.87	1.17	0.21	0.33	0.50	0.20	0.38	0.52	0.16	0.22	0.24	0.18	0.19	0.32
28	WOLR	4.33	1.26	0.47	0.16	-0.01	0.03	0.15	0.10	0.38	0.05	-0.01	0.37	0.09	0.03
29	WOLN	5.45	0.90	0.06	0.35	0.17	0.01	0.03	-0.03	0.18	0.48	0.37	0.02	0.26	0.09
30	WOLI	5.87	0.97	0.00	0.15	0.21	0.00	-0.07	-0.04	0.12	0.30	0.45	-0.09	0.07	0.18
31	SATO	1.37	1.48	0.53	0.09	-0.01	0.35	0.29	0.20	0.24	-0.12	-0.14	0.57	0.16	0.13
32	OIDO	1.65	1.10	0.32	0.09	0.06	0.26	0.31	0.27	0.13	0.03	0.02	0.41	0.27	0.28
33	INRO	2.30	0.76	0.18	0.15	0.08	0.07	0.25	0.21	-0.01	0.02	0.06	0.22	0.28	0.20
34	HELO	1.86	0.77	0.29	0.22	0.11	0.32	0.43	0.37	0.15	0.04	0.02	0.36	0.38	0.34
35	VOCO	1.92	0.83	0.38	0.22	0.14	0.35	0.43	0.32	0.16	0.07	0.05	0.40	0.36	0.28

Table 20 continued

				13	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
		MEAN	SDEV	LOPR	LOPN	LOPI	MPUR	MPUN	MPUI	ROPR	ROPN	ROPI	TEMR	TEMN	TEMI
1	AUTR	4.56	1.32												
2	AUTN	5.32	0.96												
3	AUTI	5.25	1.06												
4	CHAR	4.94	1.19												
5	CHAN	5.16	0.94												
6	CHAI	5.27	1.06												
7	COMR	4.14	0.92												
8	COMN	4.84	0.99												
9	COMI	5.03	1.12												
10	INSR	4.29	1.40												
11	INSN	5.62	0.84												
12	INSI	5.95	0.84												
13	LOPR	4.69	1.26	**0.90**											
14	LOPN	5.29	0.93	0.58	**0.86**										
15	LOPI	5.43	0.92	0.29	0.69	**0.78**									
16	MPUR	4.50	1.18	0.56	0.36	0.28	**0.84**								

17	MPUN	5.16	1.00	0.26	0.45	0.36	0.48	**0.84**							
18	MPUI	5.54	1.03	0.13	0.28	0.40	0.29	0.74	**0.84**						
19	ROPR	3.94	1.29	0.46	0.30	0.16	0.39	0.19	0.02	**0.93**					
20	ROPN	4.33	1.19	0.26	0.26	0.21	0.18	0.13	0.04	0.31	**0.92**				
21	ROPI	4.57	1.29	0.13	0.13	0.28	0.07	0.00	0.03	0.14	0.76	**0.89**			
22	TEMR	4.92	1.10	0.55	0.43	0.30	0.42	0.24	0.14	0.42	0.14	0.06	**0.91**		
23	TEMN	5.34	0.97	0.39	0.61	0.49	0.32	0.42	0.30	0.24	0.13	0.07	0.60	**0.91**	
24	TEMI	5.50	1.05	0.21	0.46	0.60	0.21	0.36	0.42	0.16	0.05	0.13	0.45	0.76	**0.91**
25	VARR	4.71	1.17	0.53	0.31	0.19	0.41	0.27	0.13	0.38	0.16	0.01	0.40	0.32	0.15
26	VARN	4.96	0.96	0.42	0.56	0.42	0.35	0.36	0.15	0.33	0.31	0.16	0.38	0.44	0.34
27	VARI	4.87	1.17	0.19	0.33	0.42	0.19	0.22	0.23	0.17	0.26	0.28	0.22	0.28	0.38
28	WOLR	4.33	1.26	0.18	0.15	0.08	0.29	0.20	0.11	0.43	0.07	-0.02	0.32	0.10	0.07
29	WOLN	5.45	0.90	0.05	0.13	0.02	0.08	0.20	0.10	0.08	0.10	0.02	0.10	0.11	0.00
30	WOLI	5.87	0.97	-0.06	0.01	0.09	-0.01	0.10	0.26	-0.07	0.07	0.17	0.07	0.08	0.08
31	SATO	1.37	1.48	0.46	0.29	0.18	0.46	0.16	0.08	0.45	0.11	0.00	0.37	0.21	0.17
32	OIDO	1.65	1.10	0.39	0.40	0.28	0.36	0.15	0.12	0.33	0.27	0.24	0.22	0.26	0.25
33	INRO	2.30	0.76	0.20	0.30	0.18	0.15	0.11	0.02	0.12	0.05	0.02	0.18	0.19	0.08
34	HELO	1.86	0.77	0.41	0.52	0.38	0.44	0.29	0.23	0.26	0.12	0.07	0.26	0.32	0.28
35	VOCO	1.92	0.83	0.50	0.53	0.35	0.42	0.23	0.13	0.31	0.20	0.13	0.30	0.30	0.23

Table 20 continued

				25	26	27	28	29	30	31	32	33	34	35
		MEAN	SDEV	VARR	VARN	VARI	WOLR	WOLN	WOLI	SATO	OIDO	INRO	HELO	VOCO
1	AUTR	4.56	1.32											
2	AUTN	5.32	0.96											
3	AUTI	5.25	1.06											
4	CHAR	4.94	1.19											
5	CHAN	5.16	0.94											
6	CHAI	5.27	1.06											
7	COMR	4.14	0.92											
8	COMN	4.84	0.99											
9	COMI	5.03	1.12											
10	INSR	4.29	1.40											
11	INSN	5.62	0.84											
12	INSI	5.95	0.84											
13	LOPR	4.69	1.26											
14	LOPN	5.29	0.93											
15	LOPI	5.43	0.92											
16	MPUR	4.50	1.18											
17	MPUN	5.16	1.00											
18	MPUI	5.54	1.03											
19	ROPR	3.94	1.29											
20	ROPN	4.33	1.19											
21	ROPI	4.57	1.29											
22	TEMR	4.92	1.10											
23	TEMN	5.34	0.97											
24	TEMI	5.50	1.05											
25	VARR	4.71	1.17	**0.88**										
26	VARN	4.96	0.96	0.44	**0.89**									

27	VARI	4.87	1.17	0.19	0.69	**0.86**									
28	WOLR	4.33	1.26	0.17	0.23	0.09	**0.89**								
29	WOLN	5.45	0.90	0.09	0.09	0.03	0.33	**0.86**							
30	WOLI	5.87	0.97	-0.04	-0.04	0.05	0.19	0.63	**0.84**						
31	SATO	1.37	1.48	0.29	0.26	0.17	0.40	-0.11	-0.10	**0.95**					
32	OIDO	1.65	1.10	0.12	0.27	0.19	0.24	-0.06	-0.10	0.49	**0.86**				
33	INRO	2.30	0.76	0.07	0.13	0.06	0.14	0.09	0.02	0.27	0.32	**0.88**			
34	HELO	1.86	0.77	0.23	0.29	0.21	0.16	0.00	-0.10	0.50	0.62	0.50	**0.83**		
35	VOCO	1.92	0.83	0.23	0.34	0.21	0.19	0.00	-0.05	0.50	0.59	0.52	0.73	**0.85**	

Note: N = 349. Table entries are pairwise correlations. Correlations greater than .07 in absolute magnitude are statistically significant at $p < .05$. Reliabilities (omega coefficient) are in bold on the diagonal.

Table 21. Bivariate Distribution of Difference between Rewards and Needs

Frequencies of Bivariate Distribution				
	R < N	**R = N**	**R > N**	
	Deficiency	**Fit**	**Excess**	**Total**
AUTD	207	98	38	343
CHAD	142	111	92	345
COMD	199	109	37	345
INSD	263	62	23	348
LOPD	207	89	49	345
MPUD	202	97	44	343
ROPD	183	84	78	345
TEMD	161	123	59	343
VARD	156	87	100	343
WOLD	247	67	28	342

Percentages of Bivariate Distribution from Frequencies Above

	R < N	R = N	R > N	
	Deficiency	**Fit**	**Excess**	**Total**
AUTD	60.3%	28.6%	11.1%	100.0%
CHAD	41.2%	32.2%	26.7%	100.0%
COMD	57.7%	31.6%	10.7%	100.0%
INSD	75.6%	17.8%	6.6%	100.0%
LOPD	60.0%	25.8%	14.2%	100.0%
MPUD	58.9%	28.3%	12.8%	100.0%
ROPD	53.0%	24.3%	22.6%	100.0%
TEMD	46.9%	35.9%	17.2%	100.0%
VARD	45.5%	25.4%	29.2%	100.0%
WOLD	72.2%	19.6%	8.2%	100.0%

Note: Each variable is the result of taking the difference between Rewards and Needs. For example, AUTD = AUTR - AUTN. The result is either a deficiency, an excess, or fit.

Table 22. Results from Quadratic Regressions of Job Satisfaction on Needs-Reward Content Dimensions (H1 - H10, AB)

Regression Coefficients	LOP	AUT	MPU	ROP	COM	VAR	TEM	CHA	WOL	INS
Rewards (*R*)	0.310**	0.385***	0.554***	0.497***	0.225*	0.160*	0.465***	0.390***	0.328***	0.571***
	(0.127)	(0.120)	(0.108)	(0.0609)	(0.133)	(0.0953)	(0.155)	(0.0904)	(0.126)	(0.119)
Needs (*N*)	0.267	0.0497	-0.0639	-0.0504	-0.0988	0.233**	0.245	0.174	-0.352	-0.0898
	(0.172)	(0.177)	(0.132)	(0.0630)	(0.135)	(0.116)	(0.156)	(0.118)	(0.225)	(0.249)
Rewards squared (R^2)	-0.0334	-0.173***	-0.109**	-0.0480	-0.0214	-0.129***	-0.0817	-0.285***	-0.138***	-0.0551*
	(0.0451)	(0.0368)	(0.0482)	(0.0369)	(0.0650)	(0.0469)	(0.0658)	(0.0409)	(0.0430)	(0.0307)
Rewards x Needs (*RN*)	0.155**	0.241***	0.106	0.0426	0.183**	0.355***	0.112	0.330***	0.184***	0.0241
	(0.0772)	(0.0604)	(0.0641)	(0.0457)	(0.0809)	(0.0625)	(0.104)	(0.0540)	(0.0667)	(0.0610)
Needs Squared (N^2)	-0.124*	-0.101	-0.0150	0.00688	-0.0844	-0.210***	-0.140**	-0.0817*	-0.00497	0.0290
	(0.0732)	(0.0673)	(0.0564)	(0.0358)	(0.0612)	(0.0533)	(0.0689)	(0.0482)	(0.0769)	(0.0779)
Constant	4.975***	5.396***	5.258***	5.460***	5.523***	5.238***	4.941***	5.130***	5.870***	5.340***
	(0.131)	(0.125)	(0.117)	(0.105)	(0.108)	(0.114)	(0.135)	(0.121)	(0.170)	(0.196)
Observations	343	341	341	343	343	341	341	343	340	346
R-squared	0.221	0.371	0.234	0.205	0.110	0.221	0.153	0.296	0.256	0.331
Shape along *N* = -*R* line	H1A	H2A	H3A	H4A	H5A	H6A	H7A	H8A	H9A	H10A
b1 - b2	0.0428	0.336	0.618***	0.547***	0.324	-0.0729	0.220	0.215	0.679**	0.661**
b3 - b4 + b5	-0.313**	-0.514***	-0.229**	-0.0837	-0.289**	-0.694***	-0.333*	-0.697***	-0.326**	-0.0502
Shape along *N* = *R* line	H1B	H2B	H3B	H4B	H5B	H6B	H7B	H8B	H9B	H10B
b1 + b2	0.577***	0.435***	0.490***	0.446***	0.126	0.394**	0.711***	0.564***	-0.0241	0.482**
b3 + b4 + b5	-0.00246	-0.0330	-0.0181	0.00150	0.0775	0.0155	-0.109	-0.0375	0.0410	-0.00197

Note: N ranged from 340 to 346. The content dimensions are listed by hypothesis in the columns. The regression coefficients (R, N, R2, RN, and N2) are listed in the rows (R = Rewards, N = Needs). The shape along the line of misfit (N = -R) is presented with b1 - b2 and b3 - b4 + b5 for the slope and curvature. The shape along the line of fit (N = R) is presented with b1 + b2 and b3 + b4 + b5 for the slope and curvature. The coefficients for each line are b1, b2, b3, b4, and b5 are the coefficients on R, N, R2, RN, and N2, respectively. LOP = Leadership Opportunity, AUT = Autonomy, MPU = Meaningful Purpose, ROP = Recognition of Potential, COM = Compensation/Benefits, VAR = Variety, TEM = Teammates, CHA = Challenge, WOL = Way of Life, and INS = Inspirational Leadership. Standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 23. Results from Regressions of Outcomes of Interest and Mediation (H12, H13A-C, H14A-C)

	H12	**H13, A-C**			**H14, A-C**		
	H12	H13A	H13B	H13C	H14A	H14B	H14C
Variables	OIDO	HELO	VOCO	INRO	HELO	VOCO	INRO
OIDO					0.350***	0.342***	0.165***
					(0.0329)	(0.0363)	(0.0404)
SATO	0.358***	0.257***	0.278***	0.138***	0.131***	0.155***	0.0813***
	(0.0349)	(0.0243)	(0.0261)	(0.0266)	(0.0242)	(0.0267)	(0.0297)
Constant	3.724***	4.476***	4.427***	5.560***	3.177***	3.156***	4.929***
	(0.194)	(0.135)	(0.145)	(0.148)	(0.170)	(0.188)	(0.209)
Observations	344	344	346	345	341	343	342
R-squared	0.235	0.247	0.247	0.073	0.435	0.403	0.119

Note: All coefficients were significant at the $p<.01$ level. Standard errors in parentheses. SATO = Job Satisfaction, OIDO = Organizational Identification, HELO = Helping, VOCO = Voice, INRO = In-Role Performance.

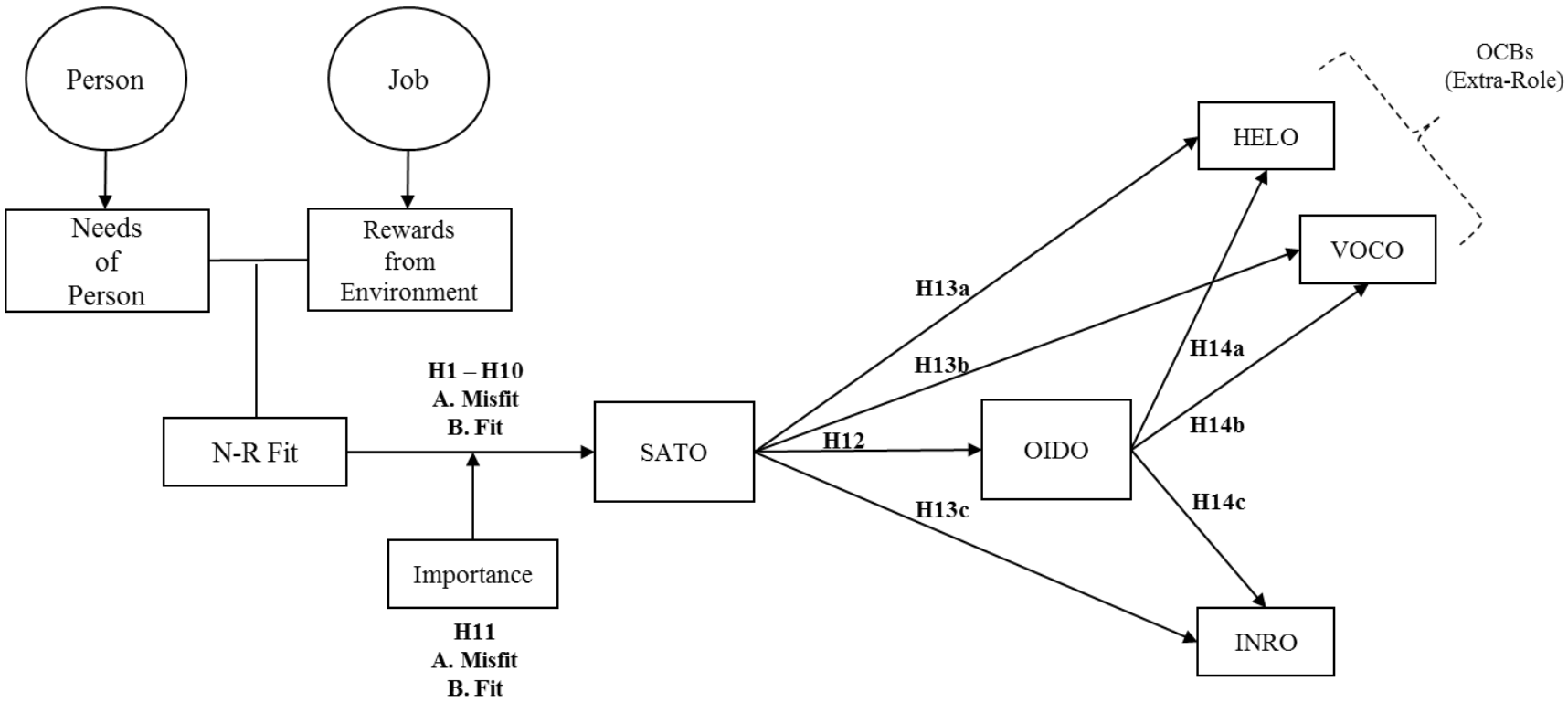

Figure 1. Proposed Framework with Hypotheses Listed.
H1-H10 (A, B) tests the ten content dimensions and the relationship of N-R fit with job satisfaction. H11 (A, B) tests the use of importance as a moderator between N-R fit and job satisfaction (SATO). H12 tests the relationship of job satisfaction (SATO) and organizational identification (OIDO). H13 (A-C) tests the first stage of the mediated effect: job satisfaction (SATO) with helping (HELO), voice (VOCO), and in-role performance (INRO). H14 (A-C) tests the second stage of the mediated effect: organizational identification (OIDO) with helping (HELO), voice (VOCO), and in-role performance (INRO).

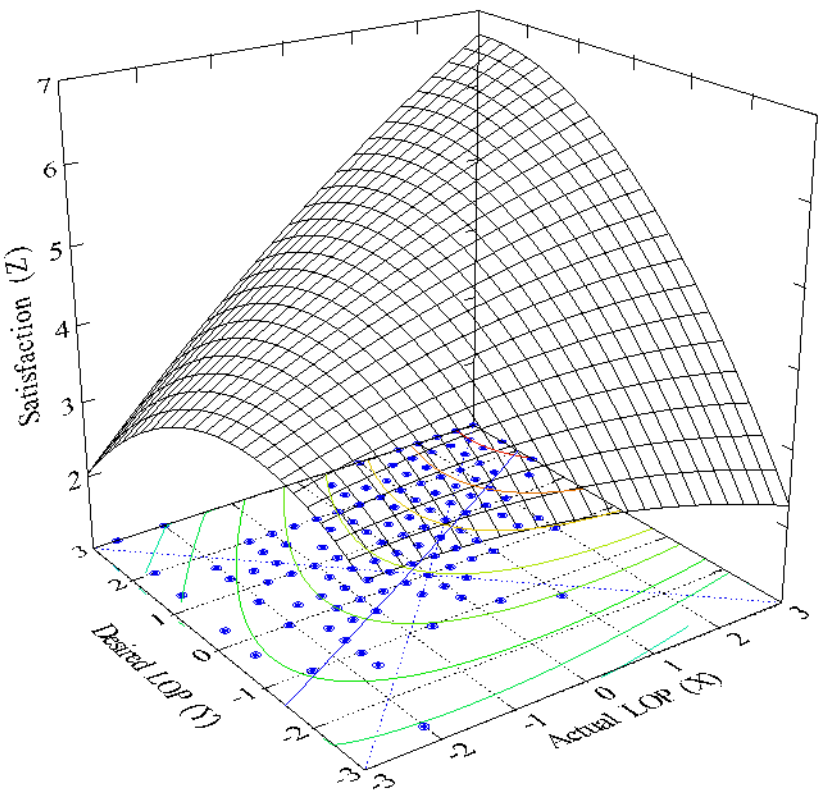

Figure 2. Leadership Opportunity (LOP).
Estimated surface relating leadership opportunity N-R fit to job satisfaction. Actual LOP (X axis) represents rewards (R). Desired LOP (Y axis) represents needs (N). Satisfaction (Z axis) represents job satisfaction. Blue dots are raw data. Dashed blue lines are fit (near to far corner) and misfit (left to right diagonal). Multi-colored curves are contour lines associated with surface. Data for N and R are scale-centered.

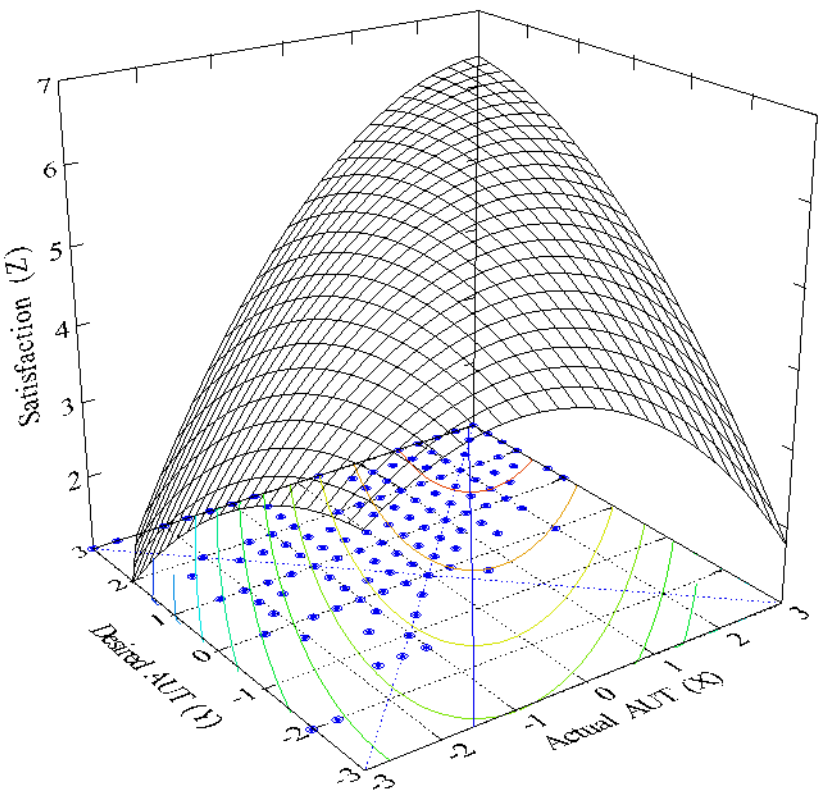

Figure 3. Autonomy (AUT).
Estimated surface relating leadership opportunity N-R fit to job satisfaction. Actual AUT (X axis) represents rewards (R). Desired AUT (Y axis) represents needs (N). Satisfaction (Z axis) represents job satisfaction. Blue dots are raw data. Dashed blue lines are fit (near to far corner) and misfit (left to right diagonal). Multi-colored curves are contour lines associated with surface. Data for N and R are scale-centered.

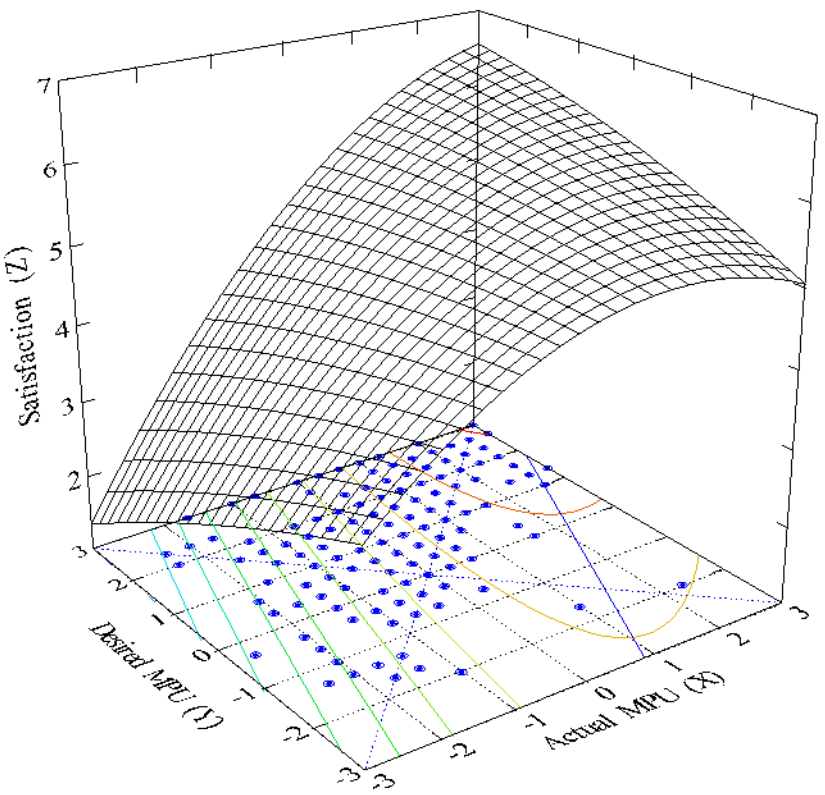

Figure 4. Meaningful Purpose (MPU).
Estimated surface relating leadership opportunity N-R fit to job satisfaction. Actual MPU (X axis) represents rewards (R). Desired MPU(Y axis) represents needs (N). Satisfaction (Z axis) represents job satisfaction. Blue dots are raw data. Dashed blue lines are fit (near to far corner) and misfit (left to right diagonal). Multi-colored curves are contour lines associated with surface. Data for N and R are scale-centered.

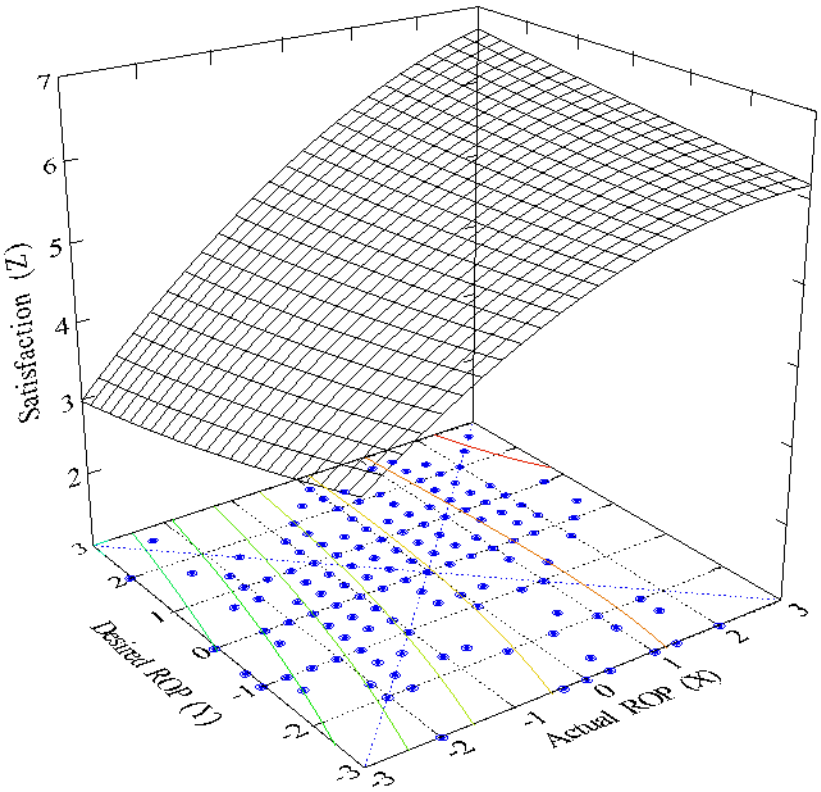

Figure 5. Recognition of Potential (ROP).
Estimated surface relating leadership opportunity N-R fit to job satisfaction. Actual ROP (X axis) represents rewards (R). Desired ROP (Y axis) represents needs (N). Satisfaction (Z axis) represents job satisfaction. Blue dots are raw data. Dashed blue lines are fit (near to far corner) and misfit (left to right diagonal). Multi-colored curves are contour lines associated with surface. Data for N and R are scale-centered.

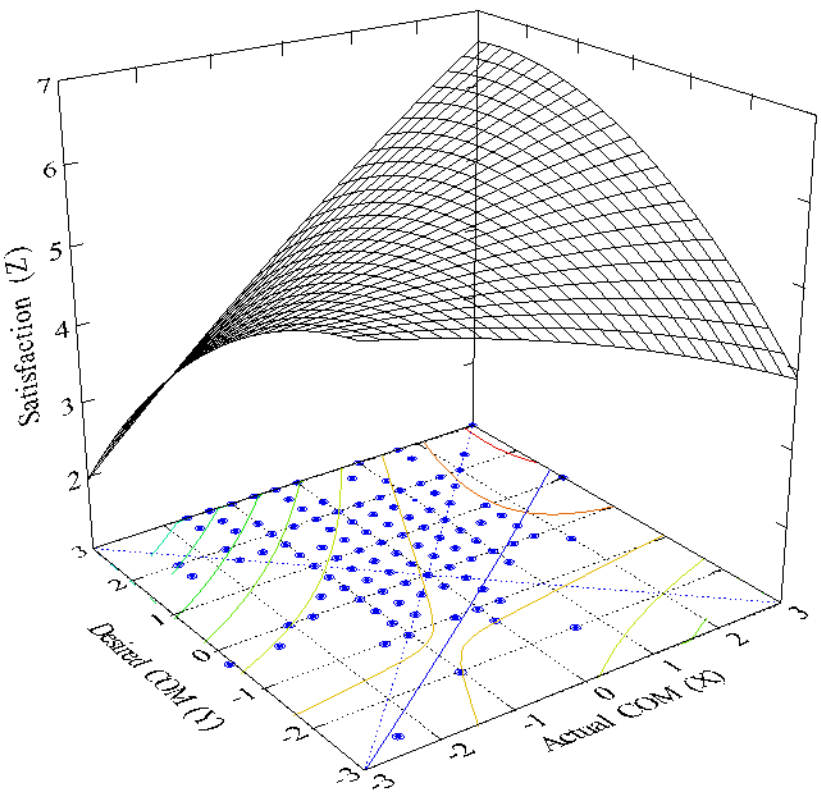

Figure 6. Compensation/Benefits (COM).
Estimated surface relating leadership opportunity N-R fit to job satisfaction. Actual COM (X axis) represents rewards (R). Desired COM (Y axis) represents needs (N). Satisfaction (Z axis) represents job satisfaction. Blue dots are raw data. Dashed blue lines are fit (near to far corner) and misfit (left to right diagonal). Multi-colored curves are contour lines associated with surface. Data for N and R are scale-centered.

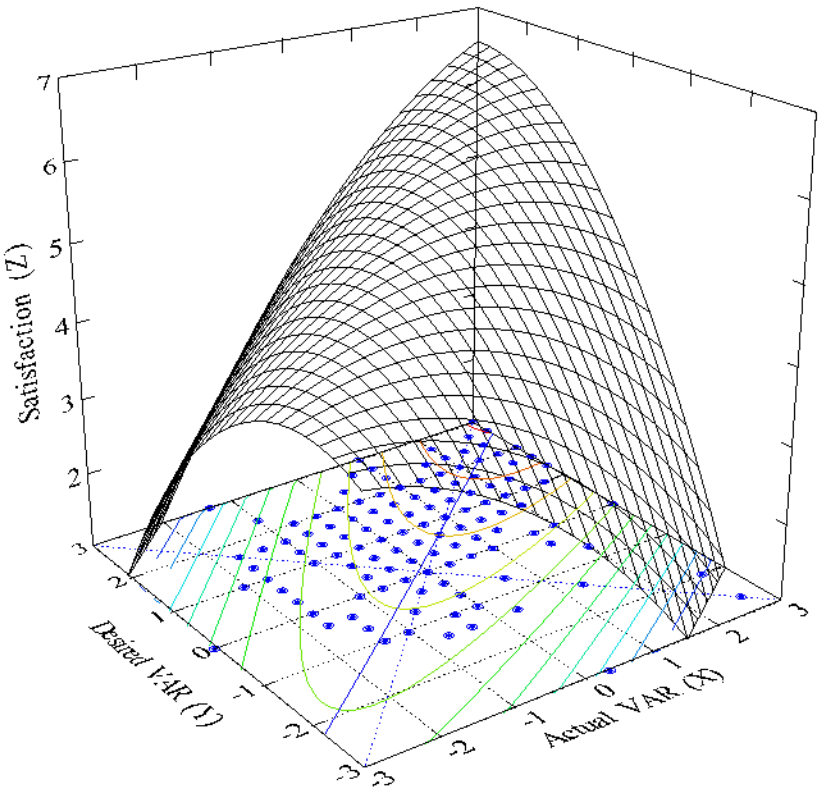

Figure 7. Variety (VAR).
Estimated surface relating leadership opportunity N-R fit to job satisfaction. Actual VAR (X axis) represents rewards (R). Desired VAR (Y axis) represents needs (N). Satisfaction (Z axis) represents job satisfaction. Blue dots are raw data. Dashed blue lines are fit (near to far corner) and misfit (left to right diagonal). Multi-colored curves are contour lines associated with surface. Data for N and R are scale-centered.

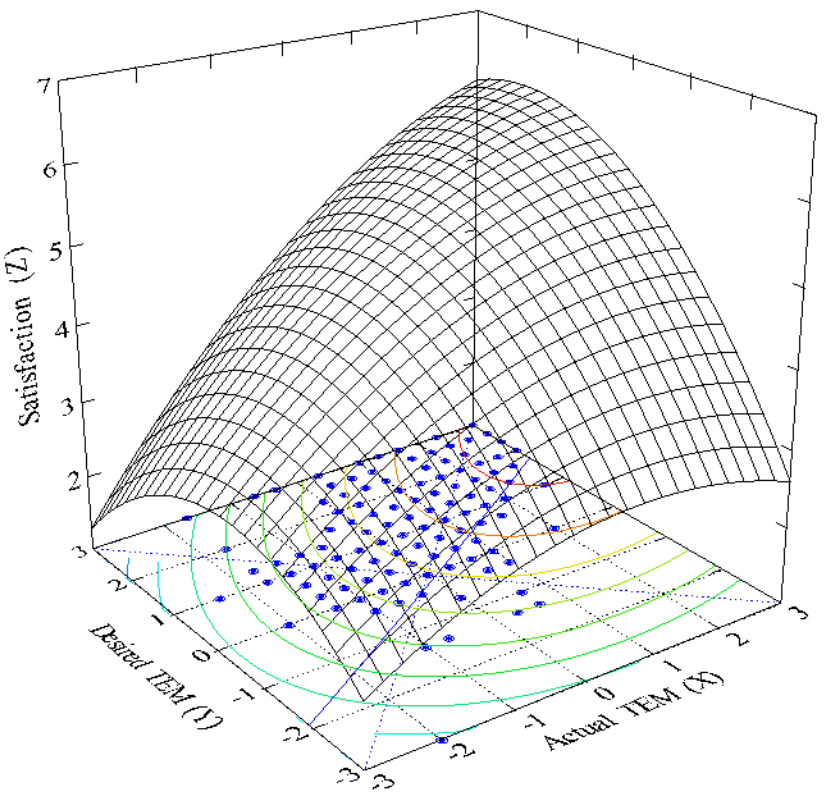

Figure 8. Teammates (TEM).
Estimated surface relating leadership opportunity N-R fit to job satisfaction. Actual TEM (X axis) represents rewards (R). Desired TEM (Y axis) represents needs (N). Satisfaction (Z axis) represents job satisfaction. Blue dots are raw data. Dashed blue lines are fit (near to far corner) and misfit (left to right diagonal). Multi-colored curves are contour lines associated with surface. Data for N and R are scale-centered.

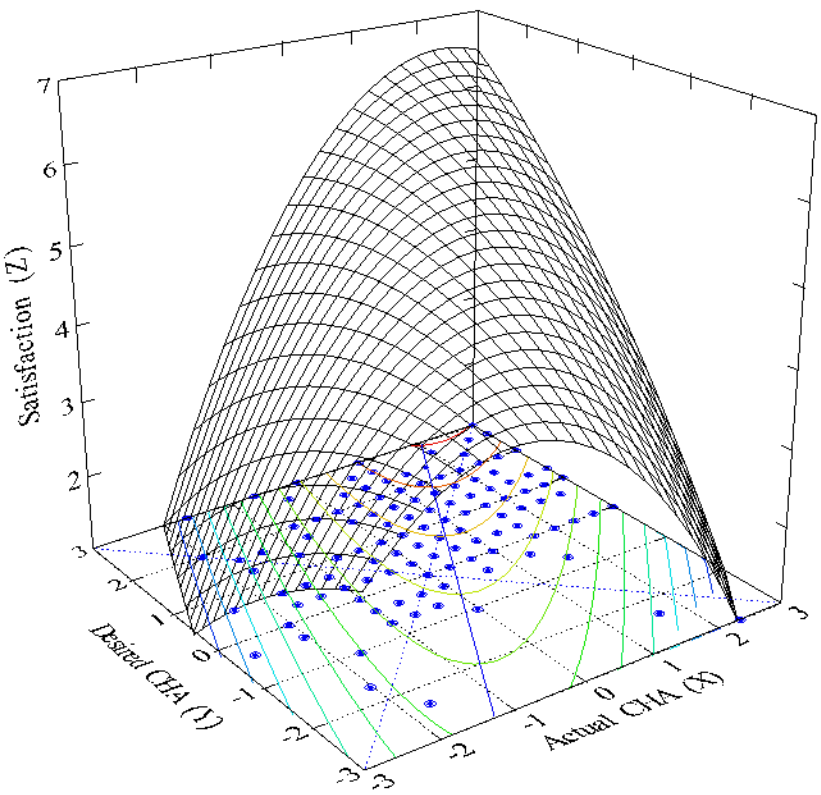

Figure 9. Challenge (CHA).
Estimated surface relating leadership opportunity N-R fit to job satisfaction. Actual CHA (X axis) represents rewards (R). Desired CHA (Y axis) represents needs (N). Satisfaction (Z axis) represents job satisfaction. Blue dots are raw data. Dashed blue lines are fit (near to far corner) and misfit (left to right diagonal). Multi-colored curves are contour lines associated with surface. Data for N and R are scale-centered.

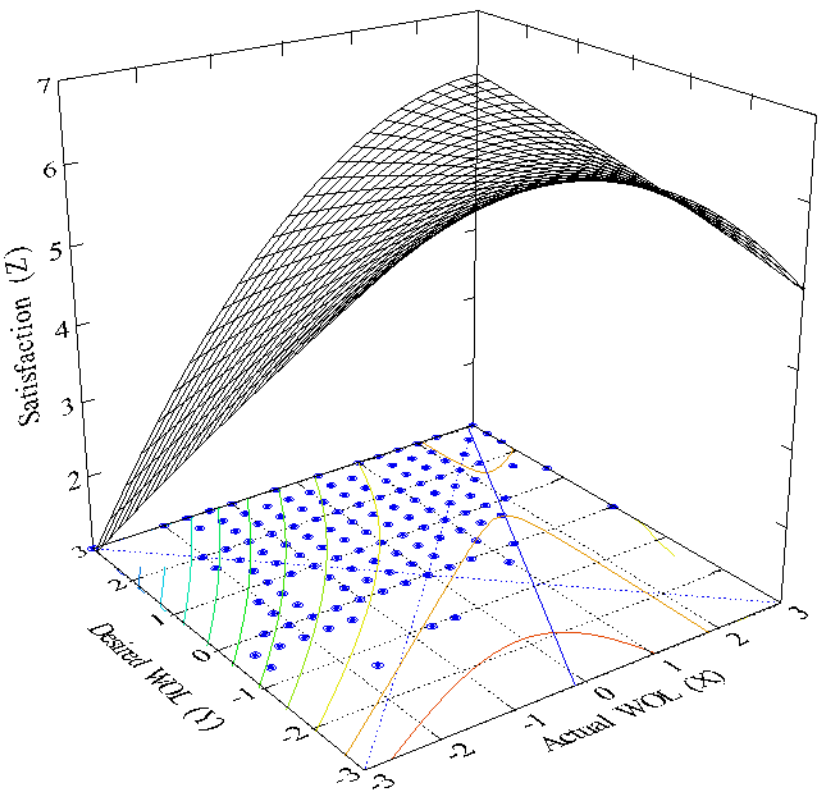

Figure 10. Way of Life (WOL).
Estimated surface relating leadership opportunity N-R fit to job satisfaction. Actual WOL (X axis) represents rewards (R). Desired WOL (Y axis) represents needs (N). Satisfaction (Z axis) represents job satisfaction. Blue dots are raw data. Dashed blue lines are fit (near to far corner) and misfit (left to right diagonal). Multi-colored curves are contour lines associated with surface. Data for N and R are scale-centered.

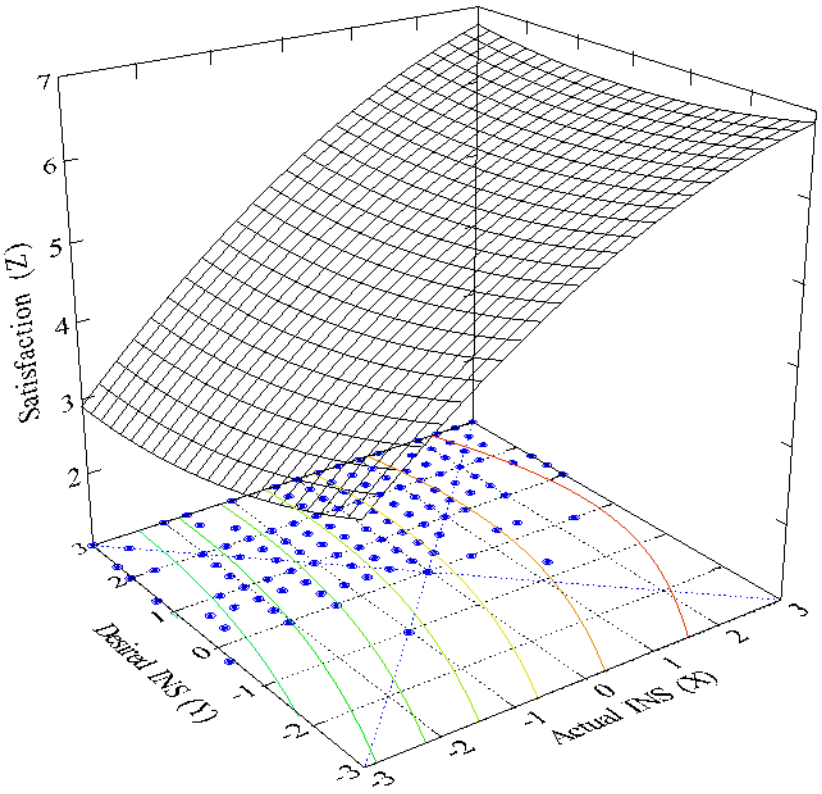

Figure 11. Inspirational Leadership (INS).
Estimated surface relating leadership opportunity N-R fit to job satisfaction. Actual INS (X axis) represents rewards (R). Desired INS (Y axis) represents needs (N). Satisfaction (Z axis) represents job satisfaction. Blue dots are raw data. Dashed blue lines are fit (near to far corner) and misfit (left to right diagonal). Multi-colored curves are contour lines associated with surface. Data for N and R are scale-centered.

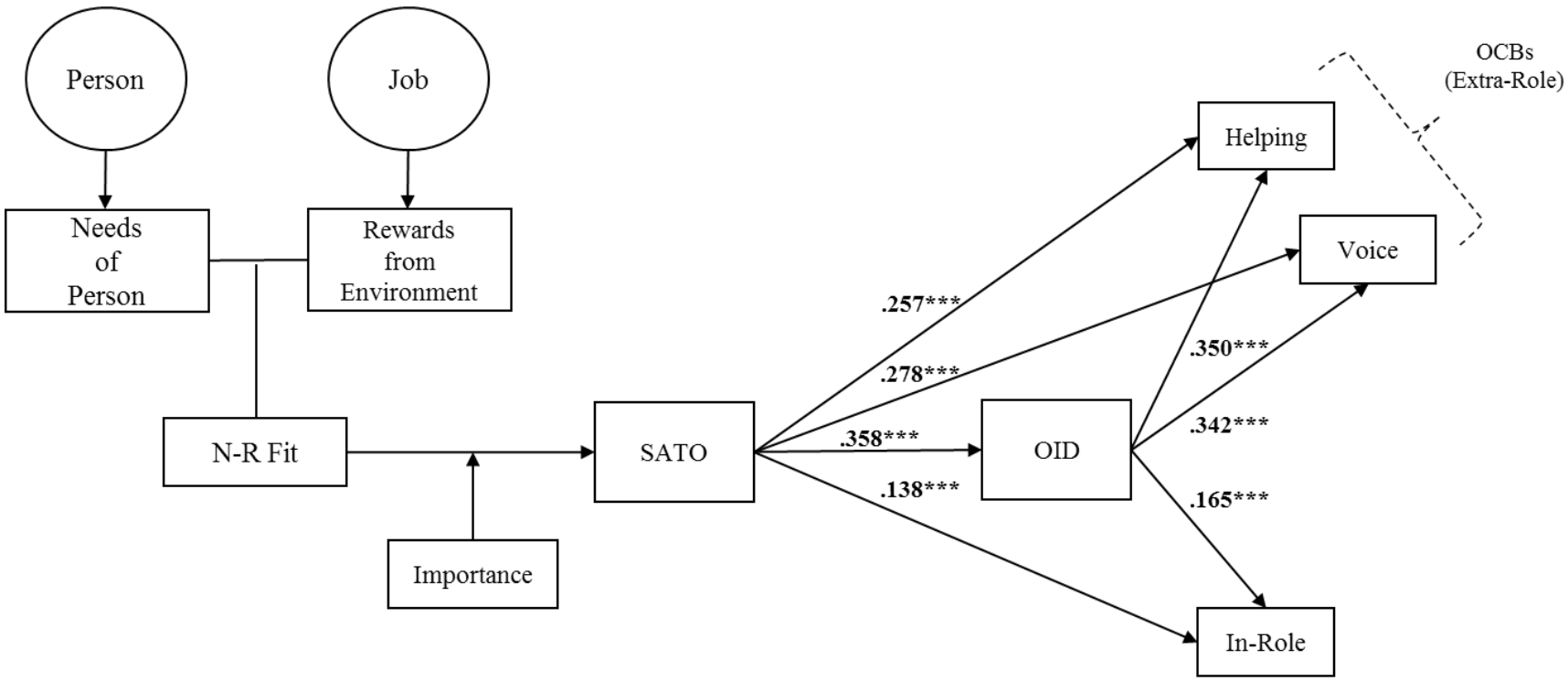

Figure 12. Proposed Framework with Coefficients Listed by Path.
The relationship of job satisfaction (SATO) and organizational identification (OIDO) corresponds with H12. The first stage of the mediated effect H13 (A-C): job satisfaction (SATO) with helping (HELO), voice (VOCO), and in-role performance (INRO). The second stage of the mediated effect H14 (A-C): organizational identification (OIDO) with helping (HELO), voice (VOCO), and in-role performance (INRO). The indirect effect for SATO-OIDO-HELO is .125 (p<.05). The indirect effect for SATO-OIDO-VOCO is .122 (p<.05). The indirect effect for SATO-OIDO-INRO is .059 (p<.05). The coefficients for all regression pathways listed in the model are significant at the p<.01 level.

APPENDIX A: CONTENT DIMENSION SURVEY

(Administered to NC AOG, Young Lions from USASOC, officers from USMA)

Q1. What is your gender?
Male
Female

Q2. What is your race?
Caucasian
African American
Hispanic
Asian
Native American
Other - List your race below.

Q3. What year were you commissioned as an officer?

Q4. What was your initial branch upon commissioning?
AD - Air Defense Artillery
AG - Adjutant General
AR - Armor
AV - Aviation
CM - Chemical
EN - Engineer
FA - Field Artillery
FI - Financial Management
IN - Infantry
MI - Military Intelligence
MP - Military Police
MS - Medical Service
OD - Ordnance
QM - Quartermaster
SC - Signal
TC - Transportation
Branch Detail - list both branches in chronological order below.

Q5. If you departed your initial branch, select your specialty branch or Functional Area (FA).
I did not depart my initial branch.
Army Medical Department (AMEDD)
Chaplain Corps (CH)
Civil Affairs (CA)
Judge Advocate General Corps (JAGC)
Special Forces (SF)
Psychological Operations (PO)
FA 24 - Telecommunications Systems Engineering

FA 29 - Electronic Warfare
FA 30 - Information Operations
FA 34 - Strategic Intelligence
FA 40 (A & C) - Space Operations & Army Astronaut
FA 46 - Public Affairs
FA 47 - United States Military Academy Professor
FA 48 - Foreign Area Officer
FA 49 - Operations Research/Systems Analysis
FA 50 - Force Management
FA 51 - Army Acquisition Corps
FA 52 - Nuclear Operations and Counter-proliferation
FA 53 - Information Systems Management
FA 57 - Simulation Operations
FA 59 - Strategist
FA 90 - Logistics Corps
Other - list below

Q6. Given your experience, list the military positions that provided the greatest personal fulfillment (for example: Company Commander, Observer Controller, Liaison, etc.).

Q7. Given your experience, list the characteristics of your military positions that provided the greatest personal fulfillment. Examples could include autonomy, purpose, variety of tasks, travel, camaraderie, leadership, promotion potential, family time, security, leadership responsibility, compensation, vacation days, etc. Please feel free to list job characteristics beyond those listed.

Q8. For you personally, what would be the qualities of an ideal job?

Q9. In what ways did the Army fulfill your expectations for the ideal job?

Q10. Are you still on active duty?
No (List the year you departed active service below.)
Yes

Q11. Did you discover greater fulfillment in a civilian position? List the characteristics that typify the preferred civilian position. (i.e., creative freedom, compensation, vacation days, work specific tasks, certainty of work schedule, etc.). Please feel free to list job characteristics beyond those listed.

Q12. Describe any shortcomings in your military career management that caused a discrepancy between your needs and expectations, and your future job availability in the Army.

APPENDIX B: CONSOLIDATION OF 25 JOB CHARACTERISTICS FROM PILOT SURVEYS

(Frequency of references in parentheses)

1. **Leadership Opportunities (94)** – The opportunity to be in charge and shape the execution of tasks for a specified unit or group of people that are interdependently related towards a common goal. The leader is provided authority to influence the workplace environment and sequence the priorities required to achieve unit goals.
2. **Meaningful Purpose (79)** – The application of effort towards a significant cause that contributes to the greater good for members of your community or society.
3. **Autonomy (60)** – The ability to exercise control over the execution of assigned goals.
4. **Responsibility (55)** – The burden of accountability for success or failure.
5. **Camaraderie (41)** – The holistic sense of cohesion, mutual support, and trust (or lack of each) between teammates within a defined unit or organization.
6. **Challenge (40)** – A situation or environment that forces an individual or team to test their abilities.
7. **Benefits/Compensation (39)** – The financial package that is offered to employees in return for their production within an organization. The financial package includes salary, medical coverage, retirement plans, or any other goods/services that would have to be paid for out of pocket if they were not included in the employee contract.
8. **Professional Growth (36)** – Individual development, training, or experiences that are focused within a certain organization, specialty, or career path. Investments in professional growth are intended to shape and develop future leaders that illustrate promotion potential within the parent organization.
9. **Personal Development (32)** – Individual growth, education, or experiences that are focused on the individual which can be readily transferred outside of the specific profession or industry. Investments in personal development can be risky if there is no contracted service term that is incurred by the receiving individual.
10. **Work/Family/Life Balance (27)** – A shared awareness that attempts to reach a healthy equilibrium between work requirements, family obligations, and personal aspirations.
11. **Authority (23)** – An established structure within an organization that clearly defines lines of decision making and control.
12. **Variety (23)** – An assortment of daily tasks and environments that provide different experiences.
13. **Travel, Cultural Experiences (22)** – The willingness to engage in different regions of the world through personal interaction which requires flexibility across many modes of transportation and separation from home.
14. **Promotion Potential (20)** – The possibility of upward mobility with increasing levels of responsibility and authority within an organization.
15. **Service to Others (15)** – The ability to apply personal effort to assist the well-being of other people.
16. **Leaders; Competent & Supportive (11)** – An environment that is characterized by leaders who are knowledgeable in their required tasks and are also positively engaged with their peers, subordinates, and senior leaders.
17. **Job Security (10)** – A state of increased certainty in the availability of future employment within your organization.

18. **Merit Driven (8)** – An environment where rewards and benefits are distributed to those individuals or groups that perform at higher levels relative to their peers. Success is rewarded while failing is relatively penalized.
19. **Mentorship (8)** – The willingness of leaders to develop peers and subordinates. Development is seen as a priority and is rewarded within the climate.
20. **Clear Goals (6)** – The outcomes or end state of an organization are apparent to all participants. This implies that the path to success is communicated to all members.
21. **Ethics & Values of Profession (3)** – The organization in which you seek admission is a field which requires expert intuition (a profession) and is recognized by others as a moral guidepost.
22. **High Functioning Teammates (2)** – The team in which you are joining is characterized by extremely qualified and competent members that will press the pace and magnitude of the organization's mission accomplishment.
23. **Ability to Hire & Fire (2)** – An environment where the senior leader has the ability to choose their team.
24. **Prestige, Recognition ( )** – The position or official work duties (title) of an individual are viewed in high regard to other people within the workplace and community.
25. **Performance Oriented Workplace ( )** – An environment where success is measured and equivalently rewarded against established metrics.

APPENDIX C: METHODOLOGY AND CONSOLIDATION OF PROPOSED CONTENT DIMENSIONS

1. Leadership Opportunities (94); Authority (23) → 117
2. Meaningful Purpose (79); Service to Others (15) → 94
3. Autonomy (60); Responsibility (55); Ability to Hire & Fire (2) → 117
4. Camaraderie (41); High Functioning Teammates (2); Ethics/Values of Profession (3) → 46
5. Challenge (40) → 40
6. Benefits/Compensation (39); Job Security (10) → 49
7. Work/Family/Life Balance (27) → 27
8. Variety (23); Travel, Cultural Experiences (22) → 45
9. Promotion Potential (20); Professional Growth (36); Personal Development (32); Prestige, Recognition ( ) → 88
10. Leaders; Competent & Supportive (11); Mentorship (8); Clear Goals (6) → 25
11. Merit Driven (8); Performance Oriented Workplace ( ) → 8

Proposed Content Dimensions

(O*NET categories, *WVI naming conventions*)

1. Achievement
    a. *Achievement* → Merit Driven (8); Performance Oriented Workplace ( ) [total = 8] --- An environment where rewards and benefits are distributed to those individuals or groups that perform at higher levels relative to their peers. Success is rewarded while failing is relatively penalized. The result of your effort is evident in the final outcome.

2. Independence
    a. *Independence* → Autonomy (60); Responsibility (55); Ability to Hire & Fire (2) [total = 117] - The ability to influence control over the execution of assigned tasks without external or higher level micromanagement. The accompanying burden of responsibility and accountability for outcomes, as measured in success or failure, is also part of independence.

3. Recognition
    a. *Management* → Leadership Opportunity (94); Authority (23) [total = 117] --- The opportunity to be in charge and shape the execution of tasks for a specified unit or group of people that are interdependently related towards a common goal. The leader is provided authority to influence the workplace environment and sequence the priorities required to achieve unit goals. This dimension provides for an established structure that clearly defines lines of decision making and control. There is an embedded willingness to develop peers and subordinates which is viewed as a priority and is rewarded within the climate.
    b. *Prestige* → Promotion Potential (20); Prestige, Recognition ( ); Professional Growth (36); Personal Development (32) [total = 88] --- The possibility of upward mobility with increasing levels of authority within an organization. The position or official work duties (title) of an individual are viewed in high regard to other people within the workplace and community. This dimension provides individual development, training, or experiences that are focused within a certain

organization, specialty, or career path. Investments in the individual shape professional growth and are intended to develop future leaders that illustrate promotion potential within the parent organization. This dimension provides individual growth, education, or experiences that are focused on the individual which can be readily transferred outside of the specific profession or industry. Investments in personal development can be risky if there is no contracted service term that is incurred by the receiving individual.

4. Relationships
    a. *Altruism* → Meaningful Purpose (79); Service to Others (15) [total = 94] --- The application of effort towards a significant cause that contributes to the greater good for members of your community or society. The ability to apply personal effort to assist the well-being of other people.
    b. *Associates* → Camaraderie (41); Ethics/Values of Profession (3); High Functioning Teammates (2) [total = 46] --- The holistic sense of cohesion, mutual support, and trust (or lack of each) between teammates within a defined unit or organization. The team in which you are joining is characterized by extremely qualified and competent members that will press the pace and magnitude of the organization's mission accomplishment.

5. Support
    a. *Supervisory Relations* → Leaders; Competent & Supportive (11); Mentorship (8); Clear Goals (6) [total = 25] --- An environment that is characterized by leaders who are knowledgeable in their required tasks and are also positively engaged with their peers, subordinates, and senior leaders.

6. Working Conditions
    a. *Economic Return* → Benefits/Compensation (39); Job Security (10) [total = 49] --- The financial package that is offered to employees in return for their production within an organization. The financial package includes salary, medical coverage, retirement plans, or any other goods/services that would have to be paid for out of pocket if they were not included in the employee contract. A state of increased certainty in the availability of future employment within your organization.
    b. *Way of Life* → Work/Family/Life Balance (27) [total = 27] --- A shared awareness that attempts to reach a healthy equilibrium between work requirements, family obligations, and personal aspirations.
    c. *Variety* → Variety (23); Travel, Cultural Experiences (22) [total = 45] --- An assortment of daily tasks and environments that provide different experiences. The willingness to engage in different regions of the world through personal interaction which requires flexibility across many modes of transportation and separation from home.
    d. *Intellectual Stimulation* → Challenge (40) [total = 40] --- A situation or environment that forces an individual or team to test their abilities.

APPENDIX D: PROPOSED CONTENT DIMENSION DEFINITIONS

(**WVI naming convention** with *Author's Re-naming*)

1. **Management** (*Leadership Opportunity*) [125] – The opportunity to be in charge and shape the execution of tasks for a specified unit or group of people that are interdependently related towards a common goal. The leader is provided authority to influence the workplace environment and sequence the priorities required to achieve unit goals. This dimension provides for an established structure that clearly defines lines of decision making and control.
2. **Independence** (*Autonomy*) [117] – The ability to influence control over the execution of assigned tasks without external or higher level micromanagement. The accompanying burden of accountability for outcomes, as measured in success or failure, is also part of independence.
3. **Altruism** (*Meaningful Purpose*) [94] – The application of personal effort towards a significant cause that contributes to the greater good for members of your community or society. The ability to apply personal effort to assist the well-being of other people.
4. **Prestige** (*Development Potential*) [88] –The possibility of upward mobility with increasing levels of responsibility and authority within an organization. The position or official work duties (title) of an individual are viewed in high regard to other people within the workplace and community. Individual development, training, education and experiences are desirable.
5. **Economic Return** (*Compensation/Benefits*) [49] – The financial benefits and retirement package that is offered to employees in return for their production within an organization. The financial package includes salary, medical coverage, retirement plans, or any other goods/services that would have to be paid for out of pocket if they were not included in the employee contract.
6. **Variety** (*Variety*) [45] – An assortment of daily tasks and environments that provide different experiences. The willingness to engage in different regions through personal interaction which requires flexibility and travel.
7. **Associates** (*Teammates*) [43] – A holistic sense of cohesion, mutual support, and trust (or lack of each) between teammates within a defined unit or organization. The team in which you are joining is characterized by extremely qualified and competent members that will press the pace and magnitude of the organization's mission accomplishment.
8. **Intellectual Stimulation** (*Challenge*) [40] – A situation or environment that forces an individual or team to test their abilities.
9. **Way of Life** (*Way of Life*) [27] – A shared awareness that attempts to reach a healthy equilibrium between work requirements, family obligations, and personal aspirations.
10. **Supervisory Relations** *(Senior Leadership*) [11] – An environment that is characterized by leaders who are knowledgeable in their required tasks and are also positively engaged with their peers, subordinates, and senior leaders. There is an embedded willingness to develop subordinates which is viewed as a priority and is rewarded within the climate.
11. **Achievement** (*Performance Orientation*) [8] – An environment where rewards and benefits are distributed to those individuals or groups that perform at higher levels relative to their peers. Success is rewarded while failing is relatively penalized. The result of your effort is evident in the final outcome.

APPENDIX E: CONTENT DIMENSIONS WITH ASSOCIATED POOL OF ITEMS PER EACH OF THREE MEASURES: WVI, WAPS, MIQ

Items with asterisk (*) mark the starting point for creation of items specific to Army population.

1. Leadership Opportunity – The chance to be in charge and direct the actions of a group organized to accomplish a common goal.

WVI
Management
*Have authority over others.
*Use leadership abilities.
Plan and organize the work of others.

WAPS
Management
Plan and arrange the work of others.
Set goals for workers to reach.
*Have authority over others.
*Set out the best way for others to do a job.

MIQ
Authority
*I could have other workers look to me for direction.
I could tell other workers how to do things.
I could supervise other people.
I could tell people what to do.
I could tell others what to do.
Responsibility
I could be responsible for planning my own work.
I could make decisions on my own.
*I could be responsible for the work of others.
I could be free to use my own judgment.
I could have a very responsible job.

2. Autonomy – The ability to determine how to accomplish a goal without external control or influence.

WVI
Independence
*Have freedom in your own area.
*Make your own decisions.
*Are your own boss.

WAPS
Independence
Can work as fast or slowly as you like.
*Can do your own work in your own way.
Can start and finish your work when you like.
*Determine the way your own work is done.

MIQ
Independence
I could work by myself
I could work alone on the job
I could be alone on the job.
I could work independently of other people.
I could be away from other workers.

3. Meaningful Purpose – The application of personal effort towards a significant cause that contributes to the greater good for those you represent.

WVI
Altruism
Help others.
Feel you have helped another person.
*Add to the well-being of other people.

WAPS
Altruism
*Help build a better society.
*Give aid to those in need.
Help others live a fuller life.
*Make an important contribution to the community.

MIQ
Social Service
*I could be of service to others.
I could be of service to other people
*I could help people.
I could do things for other people.
I could be of some small service to other people.

4. Recognition of Potential – The recognition and rewards that come from successful contributions are acknowledged with increasing levels of responsibility and authority.

WVI

Prestige

Gain prestige in your field.
*Know that others consider your work important.
Are looked up to by others.

Achievement

Get the feeling of having done a good day's work.
Know by the results when you've done a good job.
*See the results of benefitting from your efforts.

WAPS

Prestige

*Know that other people think your work is important.
Get a good reputation for your good work.
*Are looked up to by other people in society.
Can obtain a high status in the eyes of others.

MIQ

Recognition

*I would be noticed when I do a good job.
I would get full credit for the work I do.
*They would tell me when I do my job well.
I could get recognition for the work I do.
I could get praise for doing a good job.

Advancement

I could advance on the job.
I could get ahead on the job.
Promotions would be given out fairly on the job.
*The job would provide an opportunity for advancement.
There would be chances for advancement.

Achievement

I could see the results of the work I do.
*I could take pride in a job well done.
I could do something worthwhile.
I could do my best at all times.
*The job could give me a feeling of accomplishment.

Social Status

The job would carry high social position with it.
I could be "somebody" in the community.
I could "'rub elbows" with important people.
I could have a definite place in the community.
The job would give me importance in the eyes of others.

5. Compensation/Benefits – The financial compensation package that is offered to employees in return for their production within an organization.

WVI
Economic Return
Can get a raise.
*Have pay increases that keep up with the cost of living.
*Are paid enough to live right.

WAPS
Money
Are paid a high salary.
Receive more than your normal pay for good work.
*Become quite wealthy.
*Receive enough pay to live well.

MIQ
Compensation
*My pay would be fair for the amount of work I do.
I could make as much money as my friends.
My pay would compare with that for similar jobs in other companies.
The amount of work I do would be reflected in my pay.
My pay would compare well with that of other workers.

6. Variety – A work environment that provides an assortment of tasks, locations, and goals that result in diversity.

WVI
Variety
*Look forward to changes in your job.
Do not do the same thing all the time.
*Do many different things.

WAPS
NONE

MIQ
Variety
*I could have variety in my work
I could do different things from time to time.
*My work would not be routine or repetitive.
*I could do something different every day.
*I could do many different things on the job.

7. Teammates – The group of people in the work environment form cohesive bonds that exhibit mutual support and trust between individuals.

WVI
Associates
*Are one of the gang.
*Form friendships with your fellow employees.
*Have good contacts with fellow workers.

WAPS
Coworkers
Have pleasant people to work with.
*Get to know your fellow workers quite well.
Are really liked by your fellow workers.
Enjoy the company of the people you work with.

MIQ
Coworkers
*The people I work with would have a good spirit of cooperation.
*I could develop close friendships with my co-workers.
My co-workers would be friendly.
My co-workers would be easy to make friends with.
My co-workers would get along with each other.

8. Challenge – A demanding or stimulating work environment that requires an individual or team to test themselves.

WVI
Intellectual Stimulation
*Have to keep solving new problems.
*Are mentally challenged.
Need to be mentally alert.

WAPS
Physical Activity
*Work hard physically.
Do not have to spend all of your time behind a desk.
Are not just sitting down all day.
Are physically active.

MIQ
Moral Values
I could do things that don't go against my religious beliefs.
I could do things that don't go against my conscience.
I could do things that don't harm other people.
I could do the job without feeling I am cheating anyone.
I could do the work without feeling that it is morally wrong.
Activity
I could be active much of the time.

I could be "on the go," all the time.
*I could be busy all the time.
I could be doing something much of the time.
I could stay busy.

9. Way of Life – The result of balancing work requirements, family obligations, and personal aspirations towards an acceptable equilibrium.

WVI
Way of Life
*Can be the kind of person you would like to be.
*Have a way of life, while not on the job, that you like.
*Lead the kind of life you most enjoy.

WAPS
Life Style
Are free to live wherever you like.
Do not have to change the way you live.
Are not expected to move wherever the organization wants to put you.
Do not have to change where you live to gain promotion.
Detachment
Are not required to do work in your spare time.
Can forget the work while you are not there doing it.
*Do not have to think about work once you leave the workplace.
Are not expected to take work home.

MIQ
NONE

10. Inspirational Leadership – The degree to which senior decision makers foster a positive climate that is supportive and inspirational.

WVI
Supervisory Relations
Have a boss who gives you a square deal.
Have a boss who is reasonable.
Have a supervisor who is considerate.

WAPS
NONE

MIQ
Supervision, Technical
My supervisor would have a lot of technical "know-how."
*My supervisor would make good decisions.
My boss would delegate work to others.

My boss would provide help on hard problems.
*My boss would train his men well.

Supervision, Human Relations

My supervisor and I would understand each other.
*My boss would handle his men well.
*My boss would back up his men (with top management).
*My boss would take care of complaints brought to him by his men.
*My boss and his men would have a good personal relationship.

APPENDIX F: EXPERT JUDGES, ITEM RATINGS SURVEY

Q1. Please rate how well each item listed below corresponds to the following content dimension.
Content Dimension is Leadership Opportunity.
Defined: The chance to be in charge and direct the actions of a group organized to accomplish a common goal.

Q2. Please rate how well each item listed below corresponds to the following content dimension.
Content Dimension is Autonomy.
Defined: The ability to determine how to accomplish a goal without external control or influence.

Q3. Please rate how well each item listed below corresponds to the following content dimension.
Content Dimension is Meaningful Purpose.
Defined: The application of personal effort towards a significant cause that contributes to the greater good for those you represent.

Q4. Please rate how well each item listed below corresponds to the following content dimension.
Content Dimension is *Developmental Potential*.
Defined: The recognition and rewards that come from successful contributions are acknowledged with increasing levels of responsibility and authority.

Q5. Please rate how well each item listed below corresponds to the following content dimension.
Content Dimension is Compensation/Benefits.
Defined: The financial compensation package that is offered to officers in return for their production within an organization.

Q6. Please rate how well each item listed below corresponds to the following content dimension.
Content Dimension is Variety.
Defined: A work environment that provides an assortment of tasks, locations, and goals that results in diversity.

Q7. Please rate how well each item listed below corresponds to the following content dimension.
Content Dimension is Teammates.
Defined: The group of people in the work environment form cohesive bonds that exhibit mutual support and trust between individuals.

Q8. Please rate how well each item listed below corresponds to the following content dimension.
Content Dimension is Challenge.

Defined: A demanding or stimulating work environment that requires an individual or team to test themselves.

Q9. Please rate how well each item listed below corresponds to the following content dimension.
Content Dimension is Way of Life.
Defined: The results of balancing work requirements, family obligations, and personal aspirations towards an acceptable equilibrium.

Q10. Please rate how well each item listed below corresponds to the following content dimension.
Content Dimension is *Senior Leadership*.
Defined: The degree to which senior decision makers foster a positive climate that is supportive and inspirational.

APPENDIX G: CONTENT DIMENSIONS WITH ASSOCIATED ITEMS (5-ITEM SURVEY)

1. Leadership Opportunity

1. Using your leadership abilities.
2. Being in charge of a team.
3. Having your unit look to you for direction.
4. Being responsible for the efforts of others.
5. Leading the way for your team.

2. Autonomy

1. Working in ways you personally think are best.
2. Making your own decisions.
3. Doing your work in your own way.
4. Determining the way you get your tasks done.
5. Being able to decide how to get your job done.

3. Meaningful Purpose

1. Doing good for other people.
2. Giving help to those in need.
3. Making important contributions on behalf of your community.
4. Being of service to society.
5. Protecting the well-being of others.

4. Recognition of Potential

1. Knowing your organization considers your work valuable.
2. Knowing that good work will be rewarded with increasing responsibility.
3. Getting recognition when you do a good job.
4. Being acknowledged when you do your job well.
5. Receiving opportunities based on your performance.

5. Compensation/Benefits

1. Strong compensation package.
2. Enough pay to be comfortable.
3. Receiving sufficient money to live well.
4. Total benefits earned are fair.
5. The opportunity to become financially wealthy.

6. Variety

1. Experiencing changes in your daily tasks.
2. Having variety in your assignments.
3. Being able to do a wide range of tasks.
4. Doing many different things on the job.
5. Having a broad assortment of things to do.

7. Teammates

1. Forming friendships with other people in your unit.
2. Getting to know your teammates quite well.
3. Working with a spirit of cooperation among your team members.
4. Developing strong ties with your team members.
5. Having a solid sense of camaraderie with the members in your team.

8. Challenge

1. Having to solve difficult problems.
2. Being constantly challenged.
3. Doing assignments that are demanding.
4. Working on tasks that make you push yourself.
5. Tackling assignments that are really tough.

9. Way of Life

1. Being able to balance work with the rest of your life.
2. Keeping work from interfering with your personal life.
3. Leading the kind of personal life you desire.
4. Having a fulfilled life outside of work.
5. Maintaining strong relationships with friends and family.

10. Inspirational Leadership

1. Having senior leaders who inspire you.
2. Working for officers who make you want to achieve your absolute best.
3. Commanders who bring out the best in their subordinates.
4. Leaders who make junior officer development a priority.
5. Senior officers who foster a positive climate among junior officers.

APPENDIX H: NEEDS-REWARDS SURVEY (5-ITEM)

INTRODUCTION:
The purpose of this survey is to better understand the needs and priorities of future officers, and how they can be appropriately aligned with existing Army career paths. Ultimately, this type of information can help officers make informed career decisions, and also help Army personnel managers provide appropriate guidance. This survey marks the initial attempt to learn more about how we can provide better decision support data for the Army and its officer corps.

The questions do not have "right" or "wrong" answers. We are simply interested in what you think about the questions. Your answers will be held in strict confidence and will not be specifically identified with you, or impact your assignments at West Point. You should provide responses that reflect what you honestly think.

This survey should take approximately 30 minutes.

PART I: Importance of different job criteria.
When officers evaluate their jobs, they use different criteria. We would like you to rate the following criteria in terms of how important these criteria are to your job choice.

When you evaluate an ideal job, how important are the following aspects of the job in your job choice decision?

Use the following scale:
1 - Not important at all
2 -
3 - Somewhat important
4 -
5 - Quite Important
6 -
7 - Extremely Important

1. Forming friendships with other people in your unit.
2. Working in ways you personally think are best.
3. Experiencing changes in your daily tasks.
4. Knowing your organization considers your work valuable.
5. Having senior leaders who inspire you.
6. Being able to balance work with the rest of your life.
7. Having to solve difficult problems.
8. Strong compensation package.
9. Doing good for other people.
10. Using your leadership abilities.
11. Getting to know your teammates quite well.
12. Being constantly challenged.
13. Being in charge of a team.
14. Enough pay to be comfortable.
15. Making your own decisions.

16. Working for officers who make you want to achieve your absolute best.
17. Having variety in your assignments.
18. Giving help to those in need.
19. Keeping work from interfering with your personal life.
20. Knowing that good work will be rewarded with increasing responsibility.
21. Doing assignments that are demanding.
22. Making important contributions on behalf of your community.
23. Doing your work in your own way.
24. Getting recognition when you do a good job.
25. Having your unit look to you for direction.
26. Leading the kind of personal life you desire.
27. Commanders who bring out the best in their subordinates.
28. Being able to do a wide range of tasks.
29. Receiving sufficient money to live well.
30. Working with a spirit of cooperation among your team members.
31. Being of service to society.
32. Having a fulfilled life outside of work.
33. Working on tasks that make you push yourself.
34. Determining the way you get your tasks done.
35. Being responsible for the efforts of others.
36. Doing many different things on the job.
37. Leaders who make junior officer development a priority.
38. Developing strong ties with your team members.
39. Total benefits earned are fair.
40. Being acknowledged when you do your job well.
41. Being able to decide how to get your job done.
42. Maintaining strong relationships with friends and family.
43. Protecting the well-being of others.
44. Having a solid sense of camaraderie with the members in your team.
45. The opportunity to become financially wealthy.
46. Senior officers who foster a positive climate among junior officers.
47. Receiving opportunities based on your performance.
48. Leading the way for your team.
49. Having a broad assortment of things to do.
50. Tackling assignments that are really tough.

Part II: What do you have? What do you want?
At West Point, cadets hold many different positions that involve responsibilities outside of the classroom. Likewise, cadets have different preferences for what these positions might offer. These questions focus on the characteristics of the position you currently hold and your preferences for those characteristics.

For each characteristic, we would like you to answer two different questions:
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

Use the following scale:
1 - Not at all
2 -
3 -
4 - A moderate amount
5 -
6 -
7 - A very great amount

1. **Forming friendships with other people in your unit.**

How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

2. **Working in ways you personally think are best.**

How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

3. **Experiencing changes in your daily tasks.**

How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

4. **Knowing your organization considers your work valuable.**

How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

5. **Having senior leaders who inspire you.**

How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

6. **Being able to balance work with the rest of your life.**

How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

7. Having to solve difficult problems.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

8. Strong compensation package.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

9. Doing good for other people.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

10. Using your leadership abilities.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

11. Getting to know your teammates quite well.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

12. Being constantly challenged.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

13. Being in charge of a team.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

14. Enough pay to be comfortable.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

15. Making your own decisions.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

16. Working for officers who make you want to achieve your absolute best.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

17. Having variety in your assignments.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

18. Giving help to those in need.
How much of this characteristic is present in your position?

How much of this characteristic do you personally feel is right for you?

19. Keeping work from interfering with your personal life.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

20. Knowing that good work will be rewarded with increasing responsibility.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

21. Doing assignments that are demanding.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

22. Making important contributions on behalf of your community.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

23. Doing your work in your own way.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

24. Getting recognition when you do a good job.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

25. Having your unit look to you for direction.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

26. Leading the kind of personal life you desire.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

27. Commanders who bring out the best in their subordinates.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

28. Being able to do a wide range of tasks.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

29. Receiving sufficient money to live well.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

30. Working with a spirit of cooperation among your team members.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

31. Being of service to society.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

32. Having a fulfilled life outside of work.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

33. Working on tasks that make you push yourself.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

34. Determining the way you get your tasks done.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

35. Being responsible for the efforts of others.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

36. Doing many different things on the job.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

37. Leaders who make junior officer development a priority.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

38. Developing strong ties with your team members.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

39. Total benefits earned are fair.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

40. Being acknowledged when you do your job well.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

41. Being able to decide how to get your job done.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

42. Maintaining strong relationships with friends and family.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

43. Protecting the well-being of others.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

44. Having a solid sense of camaraderie with the members in your team.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

45. The opportunity to become financially wealthy.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

46. Senior officers who foster a positive climate among junior officers.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

47. Receiving opportunities based on your performance.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

48. Leading the way for your team.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

49. Having a broad assortment of things to do.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

50. Tackling assignments that are really tough.
How much of this characteristic is present in your position?
How much of this characteristic do you personally feel is right for you?

Part III: Outcomes

Officers can engage in their assigned positions and companies in many different ways. We would like you to rate the following statements in terms of your agreement or disagreement as it relates to your current position and your current company.

Rate the following statements in terms of your agreement or disagreement.

According to the following scale:

-3 - Strongly Disagree
-2 - Moderately Disagree
-1 - Slightly Disagree
0 - Neither Agree Nor Disagree
+1 - Slightly Agree
+2 - Moderately Agree
+3 - Strongly Agree

1. I always keep well informed about issues where my opinion might be useful to my company.
2. I consistently help others in my company with their responsibilities.
3. I fulfill all of my performance expectations.
4. I persistently develop and make recommendations concerning issues that affect my company.
5. If a rumor in the Corps of Cadets criticized my company, I would feel embarrassed.
6. I can be counted on to speak up in my company with ideas for new projects or changes in procedures.
7. My company's successes are my successes.
8. When I talk about my company, I say "we" rather than "they".
9. I am traditionally the first volunteer to do things for my company.
10. My position is very enjoyable.
11. I communicate about issues with others in my company even if my opinion is different from others in the group.
12. I always assist others in my company for the benefit of the group.
13. In general, I am satisfied with my position.
14. I fulfill all the responsibilities specified in my position.
15. I quickly speak up on issues that affect the quality of life in my company.
16. I dependably perform the tasks that are expected as part of my position.
17. I get involved to benefit my company.
18. When someone criticizes my company, it feels like a personal insult.
19. I continuously help others in my company learn about their responsibilities.
20. I am very interested in what others think about my company.
21. I always speak up and encourage others in my company to get involved in issues that affect the group.
22. All in all, the position I have is great.
23. When someone praises my company, it feels like a personal complement.
24. I fulfill each and every one of my responsibilities.
25. I regularly attend functions that help my company.

APPENDIX I: OFFICER NEEDS-REWARDS SURVEY (3-ITEM)

University of North Carolina at Chapel Hill
Consent to Participate in a Research Study
Adult Participants – Command and General Staff College
IRB Study # 15-2475
Title of Study: Army Officer Needs-Rewards Survey
Principal Investigator: LTC Spencer Clouatre
Principal Investigator Department: Kenan-Flagler Business School
Principal Investigator Phone number: 845-220-6337
Principal Investigator Email Address:
spencer_clouatre@kenan-flagler.unc.edu OR spencer.j.clouatre.mil@mail.mil
Faculty Advisor: Dr. Jeffrey Edwards
Faculty Advisor Contact Information: (919) 962-3144

SURVEY APPROVAL AUTHORITY: U.S. Army Research Institute for Behavioral & Social Sciences Survey
CONTROL NUMBER: DAPE-ARI-AO-16-3
RCS: MILPC-3
EXPIRES: 11/12/2016
ARMY SPONSOR: LTC (P) David Lyle, Office of Economic and Manpower Analysis

Informed Consent for Respondents:
LTC Spencer Clouatre here – I am asking you to take part in this study because you are entering a significant career crossroad and it is critical for our leadership to understand what job characteristics you seek.

The goal of my research is to identify the needs of the officer corps and the rewards from their existing career paths. Retention of the "right officers" for the "right jobs" requires two decisions. The Army has to decide to **retain** the officer, and the officer has to choose to **remain** in the Army. With better information, we can create mutually beneficial "**retain-remain**" decisions.

Your decision to join this study is voluntary. You may refuse to join, or you may withdraw your consent to be in this study, for any reason, without penalty.

If you choose to participate in the following survey, then I can promise your responses will be held confidentially. I am NOT asking for PII (personally identifiable information) and you can be assured that the results will NOT be reported at a level that facilitates personal identification.

The information gained in this survey will be used in my dissertation. I will draw inferences about the specific needs and rewards within branches/functional areas at different times in the officer career path. This data will be protected and stored for a minimum of three years.

Your participation is greatly appreciated! As we introduce talent management strategies, we must identify what is important to our officers. Your participation will assist in forming the initial determination of the needs of our officers and the rewards of their existing career paths.

My survey is designed to minimize your workload – the "point and click" format that will allow for quick responses. This survey should take approximately 15-20 minutes.

Clicking on the link below signifies your consent to participate in the Officer Needs-Rewards Survey. If you choose to participate, click on the link. Thank you!
INSERT LINK HERE

OFFICER NEEDS-REWARDS SURVEY
Thank you for choosing to participate in this important topic! Hopefully this research will open a dialogue that reveals what is important to our most critical assets - our leaders.
There are four parts to this survey:
Part I. Background Information.
Part II. Importance of different job characteristics.
Part III. How much you have? How much you want?
Part IV. Outcomes.
There are no "forced responses" so please be sure to complete each question.
Let your voice be heard and provide honest input. Click "Next" to begin. Thanks!

PART I: Background Information.

1. What year were you commissioned as an officer?

Response Menu: List of possible year groups for this population of officers.

2. What was your commissioning source?

Response Menu: List of three choices: 1) ROTC, 2) OCS (Federal, State, or Accelerated OCS), and 3) USMA.

3. What was your initial branch upon commissioning?

Response Menu: List of 16 branch choices available to this population of officers.

4. What is your current branch, specialty branch, or functional area (FA)?

Response Menu: List of six specialty branches, 16 functional areas, branch detail or branch transfer (with text entry), and options for "I did not depart my initial branch" or "Other – with text entry."

5. What was your Principal Duty Title from your last OER Support Form prior to assignment at Fort Leavenworth?

Response Menu: Text entry for previous Principal Duty Title.

6. What is your gender?

Response Menu: List of two choices: 1) Male, or 2) Female.

7. Are you Latino, Hispanic, or of Spanish Origin?

Response Menu: List of two choices: 1) Yes, or 2) No.

8. What is your race? Mark all that apply.

Response Menu: List of two choices: 1) White, or 2) Asian, Black or African American, American Indian or Alaska Native, or Native Hawaiian or Other Pacific Islander.

9. What is your current marital status?

Response Menu: List of four choices: 1) Never Married, 2) Married, 3) Divorced, or 4) Widow or Widower.

PART II: Importance of different job characteristics.

The following questions do not have "right" or "wrong" answers. Provide responses that reflect what you honestly think. When officers evaluate their jobs, they use different criteria. Please rate the following job characteristics in terms of how important they are to your job choice.

When you think about your ideal job, how important is each job characteristic to you?

Use the following scale:

1 – Not important at all
2 – Slightly important
3 – Somewhat important
4 – Moderately important
5 – Quite important
6 – Very important
7 – Extremely important

1. Being able to balance work with the rest of your life.
2. Doing good for other people.
3. Using your leadership abilities.
4. Getting to know your teammates quite well.
5. Enough pay to be comfortable.
6. Knowing your work will be rewarded.
7. Working for officers who make you want to achieve your absolute best.
8. Having variety in your assignments.
9. Giving help to those in need.
10. Doing work that is demanding.
11. Doing your work in your own way.
12. Getting recognition when you do a good job.
13. Having your unit look to you for direction.
14. Leading the kind of personal life you desire.
15. Commanders who bring out the best in their subordinates.
16. Receiving sufficient money to live well.
17. Being of service to society.
18. Having a fulfilled life outside of work.
19. Working on tasks that make you push yourself.
20. Determining the way you get your tasks done.
21. Doing many different things on the job.
22. Developing strong ties with your team members.

23. Being acknowledged when you do your job well.
24. Having a solid sense of camaraderie with the members in your team.
25. The opportunity to become financially wealthy.
26. Senior officers who foster a positive climate among junior officers.
27. Leading the way for your team.
28. Being able to decide how to get your job done.
29. Having a broad assortment of things to do.
30. Tackling assignments that are really tough.

Part III: How much did you have? How much did you want?
Officers hold many different positions that involve a variety of responsibilities. Likewise, officers have many different preferences for what these positions might offer.

These questions ask you to focus on the characteristics of the job you have most recently held prior to assignment to Fort Leavenworth and your preferences for those characteristics.

The same two questions are repeated for each job characteristic:
How much of each job characteristic did you have?
How much of each job characteristic did you want?

Use the following scale:
1 – None at all
2 – Slight amount
3 – Small amount
4 – Moderate amount
5 – Considerable amount
6 – Great amount
7 – Extreme amount

1. Job Characteristic: **Being able to balance work with the rest of your life.**
How much did you have?
How much did you want?

2. Job Characteristic: **Doing good for other people.**
How much did you have?
How much did you want?

3. Job Characteristic: **Using your leadership abilities.**
How much did you have?
How much did you want?

4. Job Characteristic: **Getting to know your teammates quite well.**
How much did you have?
How much did you want?

5. Job Characteristic: **Enough pay to be comfortable.**
How much did you have?
How much did you want?

6. Job Characteristic: **Knowing your work will be rewarded.**
How much did you have?
How much did you want?

7. Job Characteristic: **Working for officers who make you want to achieve your absolute best.**
How much did you have?
How much did you want?

8. Job Characteristic: **Having variety in your assignments.**
How much did you have?
How much did you want?

9. Job Characteristic: **Giving help to those in need.**
How much did you have?
How much did you want?

10. Job Characteristic: **Doing work that is demanding.**
How much did you have?
How much did you want?

11. Job Characteristic: **Doing your work in your own way.**
How much did you have?
How much did you want?

12. Job Characteristic: **Getting recognition when you do a good job.**
How much did you have?
How much did you want?

13. Job Characteristic: **Having your unit look to you for direction.**
How much did you have?
How much did you want?

14. Job Characteristic: **Leading the kind of personal life you desire.**
How much did you have?
How much did you want?

15. Job Characteristic: **Commanders who bring out the best in their subordinates.**
How much did you have?
How much did you want?

16. Job Characteristic: **Receiving sufficient money to live well.**
How much did you have?
How much did you want?

17. Job Characteristic: **Being of service to society.**
How much did you have?
How much did you want?

18. Job Characteristic: **Having a fulfilled life outside of work.**
How much did you have?
How much did you want?

19. Job Characteristic: **Working on tasks that make you push yourself.**
How much did you have?
How much did you want?

20. Job Characteristic: **Determining the way you get your tasks done.**
How much did you have?
How much do you want?

21. Job Characteristic: **Doing many different things on the job.**
How much did you have?
How much did you want?

22. Job Characteristic: **Developing strong ties with your team members.**
How much did you have?
How much did you want?

23. Job Characteristic: **Being acknowledged when you do your job well.**
How much did you have?
How much did you want?

24. Job Characteristic: **Having a solid sense of camaraderie with the members in your team.**
How much did you have?
How much did you want?

25. Job Characteristic: **The opportunity to become financially wealthy.**
How much did you have?
How much did you want?

26. Job Characteristic: **Senior officers who foster a positive climate among junior officers.**
How much did you have?
How much did you want?

27. Job Characteristic: **Leading the way for your team.**
How much did you have?
How much did you want?

28. Job Characteristic: **Being able to decide how to get your job done.**
How much did you have?
How much did you want?

29. Job Characteristic: **Having a broad assortment of things to do.**
How much did you have?
How much did you want?

30. Job Characteristic: **Tackling assignments that are really tough.**
How much did you have?
How much did you want?

Part IV: Your Position and Your Unit.
Officers can engage in their assigned positions and units in many different ways. Please rate the following statements in terms of your agreement or disagreement as it relates to your most recent position prior to assignment at Fort Leavenworth and your most recent unit prior to Fort Leavenworth.

Rate the following statements in terms of your agreement or disagreement.

According to the following scale:
-3 - Strongly Disagree
-2 - Moderately Disagree
-1 - Slightly Disagree
0 - Neither Agree Nor Disagree
+1 - Slightly Agree
+2 - Moderately Agree
+3 - Strongly Agree

1. I always keep well informed about issues where my opinion might be useful to my unit.
2. I consistently help others in my unit with their responsibilities.
3. I fulfill all of my performance expectations.
4. I persistently make recommendations concerning issues that affect my unit.
5. If a rumor on my post criticized my unit, I would feel embarrassed.
6. I can be counted on to speak up in my unit with ideas for new projects or changes in procedures.
7. My unit's successes are my successes.
8. When I talk about my unit, I say "we" rather than "they."
9. I am traditionally the first volunteer to do things for my unit.
10. My position is very enjoyable.

11. I communicate about issues with others in my unit even if my opinion is different from others in the group.
12. I always assist others in my unit for the benefit of the group.
13. In general, I am satisfied with my position.
14. I fulfill all the responsibilities specified in my position.
15. I quickly speak up on issues that affect the quality of life in my unit.
16. I dependably perform the tasks that are expected as part of my position.
17. I get involved to benefit my unit.
18. When someone criticizes my unit, it feels like a personal insult.
19. I continuously help others in my unit learn about their responsibilities.
20. I am very interested in what others think about my unit.
21. I always encourage others in my unit to get involved in issues that affect the group.
22. All in all, the position I have is great.
23. When someone praises my unit, it feels like a personal compliment.
24. I fulfill each and every one of my responsibilities.
25. I regularly attend functions that help my unit.

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